



#9

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Vogels et al.

Serial No.: 10/002,750

Filed: 11/15/2001

For: COMPLEMENTING CELL LINES

Confirmation No.: 5853

Examiner: To be assigned

Group Art Unit: 1648

Attorney Docket No.: 2183-5148US

NOTICE OF EXPRESS MAILING

Express Mail Mailing Label Number: EL092593948USDate of Deposit with USPS: May 31, 2002Person making Deposit: Orlena Howell

STATEMENT UNDER 37 C.F.R. §§ 1.821 THROUGH 1.825

Commissioner for Patents
Washington, D.C. 20231

Sir:

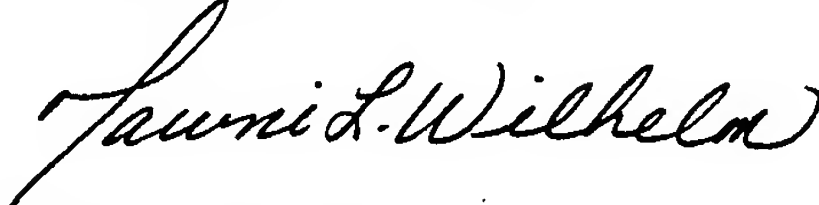
I, Tawni L. Wilhelm, an attorney registered to practice before the United States Patent & Trademark Office and attorney of record for this application, state that:

1. The enclosed paper copy of the substitute SEQUENCE LISTING, as well as the enclosed copy of the substitute SEQUENCE LISTING in computer readable form (CRF), are included herewith to comply with the requirements of 37 C.F.R. §§ 1.821 and/or 1.825 as requested by the Examiner.
2. The enclosed copy of the substitute SEQUENCE LISTING in computer readable form (CRF) is believed to be the same as the paper copy of the substitute SEQUENCE LISTING.

Serial No.: 10/002,750

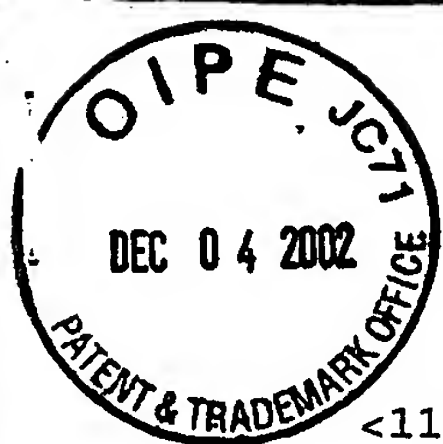
3. The SEQUENCE LISTINGS submitted herewith are believed to contain no "new matter" with regard to the referenced patent application.

Respectfully submitted,



Tawni L. Wilhelm
Registration No. 47,456
Attorney for Applicant(s)
TRASKBRITT, PC
P.O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: 801-532-1922

Date: May 31, 2002
ACT/bv



#9

SEQUENCE LISTING

<110> Vogels, Ronald
Havenga, Menzo J.E.
Mehtali, Majid

<120> Complementing cell lines

<130> P58204US10

<140> 10/002,750
<141> 2001-11-15

<150> US 09/713,678
<151> 2000-11-15

<160> 50

<170> PatentIn Ver. 2.1

<210> 1
<211> 14
<212> DNA
<213> adenoviridae

<220>
<221> misc_feature
<222> (1)..(14)
<223> /note="5'end"

<400> 1
ccaataatat acct 14

<210> 2
<211> 21
<212> DNA
<213> adenoviridae

<220>
<221> misc_feature
<222> (1)..(21)
<223> /note="3'end"

<400> 2
aggtatatta ttgatgatgg g 21

<210> 3
<211> 18
<212> DNA
<213> adenoviridae

<220>
<221> misc_feature
<222> (1)..(18)
<223> /note="Terminal sequence"

<400> 3
catcatcaat aatataacc 18

<210> 4
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: oligo
ExSalPacF

<220>
<221> misc_feature
<222> (1)..(47)

<400> 4
tcgatggcaa acagctatta tgggtattat gggttcgaat taattaa

47

<210> 5
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: oligo
ExSalPacR

<220>
<221> misc_feature
<222> (1)..(47)

<400> 5
tcgattaatt aattcgaacc cataataccc ataatagctg tttgcca

47

<210> 6
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer
PCLIPMSF

<220>
<221> misc_feature
<222> (1)..(42)

<400> 6
cccccaattgg tcgaccatca tcaataatat accttatttt gg

42

<210> 7
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer
pCLIPBSRGI

<220>
<221> misc_feature

<222> (1)..(22)

<400> 7

gcgaaaattg tcacttcctg tg

22

<210> 8

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo
Ecolinker+

<220>

<221> misc_feature

<222> (1)..(37)

<400> 8

aattcggcgc gccgtcgacg atatcgatag cggccgc

37

<210> 9

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: oligo
Ecolinker-

<220>

<221> misc_feature

<222> (1)..(37)

<400> 9

aattgcggcc gctatcgata tcgtcgacgg cgcgccg

37

<210> 10

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
oligonucleotide HindXba+

<220>

<221> misc_feature

<222> (1)..(49)

<400> 10

agctctagag gatccgttaa cgctagcgaa ttcaccggta ccaagctta

49

<210> 11

<211> 49

<212> DNA

<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 oligonucleotide HindXba-

<220>
 <221> misc_feature
 <222> (1)..(49)

<400> 11
 ctagtaagct tggtaccggt gaattcgcta gcgtaacgg atcctctag 49

<210> 12
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: primer 35F1

<220>
 <221> misc_feature
 <222> (1)..(44)

<400> 12
 cggaattctt aattaatcga catcatcaat aatatacctt atag 44

<210> 13
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: primer 35R2

<220>
 <221> misc_feature
 <222> (1)..(33)

<400> 13
 ggtggtccta ggctgacacc tacgtaaaaa cag 33

<210> 14
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: primer 335F3

<220>
 <221> misc_feature
 <222> (1)..(30)

<400> 14
 tgggtggagat ctggtgagta ttgggaaaac 30

<210> 15
 <211> 37

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer 435R4

 <220>
 <221> misc_feature
 <222> (1)..(37)

 <400> 15
 cggaattctt aattaaggga aatgcaaadc tgtgagg 37

 <210> 16
 <211> 34
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer 535F5

 <220>
 <221> misc_feature
 <222> (1)..(34)

 <400> 16
 cggaattcgc ggccgcggtg agtattggga aaac 34

 <210> 17
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer 635R6

 <220>
 <221> misc_feature
 <222> (1)..(22)

 <400> 17
 cgccagatcg tctacagaac ag 22

 <210> 18
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer 735F7

 <220>
 <221> misc_feature
 <222> (1)..(23)

 <400> 18
 gaatgctggc ttcagttgta atc 23

<210> 19
 <211> 42
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer 835R8

 <220>
 <221> misc_feature
 <222> (1)..(42)

 <400> 19
 cggaattcgc ggccgcattt aaatcatcat caataatata cc 42

 <210> 20
 <211> 33
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer 135F11

 <220>
 <221> misc_feature
 <222> (1)..(33)

 <400> 20
 ggggtaccga attctcgcta gggatatttat acc 33

 <210> 21
 <211> 38
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer 235F10

 <220>
 <221> misc_feature
 <222> (1)..(38)

 <400> 21
 gctctagacc tgcaggtag tcagtttctt ctccactg 38

 <210> 22
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer 3HBV-F

 <220>
 <221> misc_feature
 <222> (1)..(27)

 <400> 22
 ggctctagag atccttcgcg ggacgtc 27

<210> 23
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer 4HBV-R

 <220>
 <221> misc_feature
 <222> (1)..(26)

 <400> 23
 ggcgaattca ctgccttcca ccaagc 26

 <210> 24
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide 1BB1

 <220>
 <221> misc_feature
 <222> (1)..(17)

 <400> 24
 gtgcctaggc cacgggg 17

 <210> 25
 <211> 13
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide 2BB2

 <220>
 <221> misc_feature
 <222> (1)..(13)

 <400> 25
 gtggcctagg cac 13

 <210> 26
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer 3270F

 <220>
 <221> misc_feature
 <222> (1)..(20)

<p><400> 26 cacctctgcc taatcatctc</p>	20
<p><210> 27 <211> 27 <212> DNA <213> Artificial Sequence</p>	
<p><220> <223> Description of Artificial Sequence: primer 4270R</p>	
<p><220> <221> misc_feature <222> (1)..(27)</p>	
<p><400> 27 gctctagaaa ttccactgcc ttccacc</p>	27
<p><210> 28 <211> 25 <212> DNA <213> Artificial Sequence</p>	
<p><220> <223> Description of Artificial Sequence: primer 135D21/ 535D21</p>	
<p><220> <221> misc_feature <222> (1)..(25)</p>	
<p><400> 28 ttagatccat ggatcccgca gactc</p>	25
<p><210> 29 <211> 18 <212> DNA <213> Artificial Sequence</p>	
<p><220> <223> Description of Artificial Sequence: primer 235B3/635B3</p>	
<p><220> <221> misc_feature <222> (1)..(18)</p>	
<p><400> 29 cctcagcccc atttccag</p>	18
<p><210> 30 <211> 20 <212> DNA <213> Artificial Sequence</p>	
<p><220> <223> Description of Artificial Sequence: primer 15E1A-F</p>	

<220>
<221> misc_feature
<222> (1)..(20)

<400> 30
gagacgcccg acatcacctg

20

<210> 31
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer 25E1B-R

<220>
<221> misc_feature
<222> (1)..(26)

<400> 31
caagcctcca tggggtcaga tgtaac

26

<210> 32
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer
45AK/5AK

<220>
<221> misc_feature
<222> (1)..(21)

<400> 32
gagcgaagaa acccatctga g

21

<210> 33
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer
52155R/2155R

<220>
<221> misc_feature
<222> (1)..(19)

<400> 33
ggtccaggcc ggctctcgg

19

<210> 34
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer 62155F

<220>
<221> misc_feature
<222> (1)..(18)

<400> 34
ccgagagccg gcctggac

18

<210> 35
<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer
735F10/35F10

<220>
<221> misc_feature
<222> (1)..(38)

<400> 35
gctctagacc tgcaggtag tcagtttctt ctccactg

38

<210> 36
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer Bsp-R

<220>
<221> misc_feature
<222> (1)..(43)

<400> 36
gctctagacc tgcaggtag caacaattcc ggatatttac aag

43

<210> 37
<211> 69
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
oligonucleotide C2SPA-1

<220>
<221> misc_feature
<222> (1)..(69)

<400> 37
ccctgcaggg acttgactca tgcttggttc actttcacat ggaatttccc agttatgaaa 60
ttaataaag 69

<210> 38
 <211> 69
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide C2SPA-2

 <220>
 <221> misc_feature
 <222> (1)..(69)

 <400> 38
 gtctagacac acaaaaaacc aacacactat tgcaatgaaa ataaatttcc ttatttaatt 60
 tcataactg 69

 <210> 39
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer C2for

 <220>
 <221> misc_feature
 <222> (1)..(24)

 <400> 39
 cgggatcccc tgcagggact tgac 24

 <210> 40
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer SPArev

 <220>
 <221> misc_feature
 <222> (1)..(31)

 <400> 40
 ttgcgactta agtctagaca cacaaaaaac c 31

 <210> 41
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: primer 2155F

 <220>
 <221> misc_feature
 <222> (1)..(19)

<400> 41
ccgagagccg gcctggacc

19

<210> 42
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer 35E3for

<220>
<221> misc_feature
<222> (1)..(20)

<400> 42
aatgactaat gcaggtgcgc

20

<210> 43
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer 35E3rev

<220>
<221> misc_feature
<222> (1)..(28)

<400> 43
cgacgcgttg tagtcgttga gcttctag

28

<210> 44
<211> 34794
<212> DNA
<213> adenoviridae

<220>
<221> misc_feature
<222> (1)..(34794)
<223> /note="Nucleic acid sequence of Ad 35"

<400> 44
catcatcaat aatatacctt atagatggaa tgggtgccaat atgtaaatga ggtgatttta 60
aaaagtgtgg gccgtgtggt gattggctgt ggggttaacg gttaaaaggg gcggcgcggc 120
cgtgggaaaa tgacgtttta tgggggtgga gtttttttgc aagttgtcgc gggaaatggt 180
acgcataaaa aggcttcttt tctcacggaa ctacttagtt ttcccacggt atttaacagg 240
aatgaggta gttttgaccg gatgcaagtg aaaattgctg attttcgcgc gaaaactgaa 300
tgaggaagtg tttttctgaa taatgtggta tttatggcag ggtggagtat ttgttcaggg 360
ccaggtagac tttgacccat tacgtggagg tttcgattac cgtgtttttt acctgaattt 420
ccgcgtaccg tgtcaaagtc ttctgttttt acgtaggtgt cagctgatcg ctagggtatt 480
tatacctcag ggtttgtgtc aagaggccac tcttgagtgc cagcgagaag agttttctcc 540
tctgcgccgg cagtttaata ataaaaaaat gagagatttg cgatttctgc ctcaggaaat 600
aatctctgct gagactggaa atgaaatatt ggagcttggt gtgcacgccc tgatgggaga 660
cgatccggag ccacctgtgc agctttttga gcctcctacg cttcaggaac tgtatgattt 720
agaggtagag ggatcggagg attctaata ggaagctgtg aatggctttt ttaccgattc 780
tatgctttta gctgctaata aaggattaga attagatccg cctttggaca ctttcaatac 840
tccagggggtg attgtggaaa gcggtacagg tgtaagaaaa ttacctgatt tgagttccgt 900

ggactgtgat	ttgcactgct	atgaagacgg	gtttcctccg	agtgatgagg	aggaccatga	960
aaaggagcag	tccatgcaga	ctgcagcggg	tgagggagtg	aaggctgcca	atggttggtt	1020
tcagttggat	tgcccggagc	ttcctggaca	tggtctgaag	tcttgtgaat	ttcacaggaa	1080
aaatactgga	gtaaagggaac	tgttatgttc	gctttgttat	atgagaacgc	actgccactt	1140
tatttacagt	aagtgtgttt	aagttaaaat	ttaaaggaat	atgctgtttt	tcacatgtat	1200
attgagtgtg	agttttgtgc	ttcttattat	aggtcctgtg	tctgatgctg	atgaatcacc	1260
atctcctgat	tctactacct	cacctcctga	tattcaagca	cctgttcctg	tggacgtgcg	1320
caagcccatt	cctgtgaagc	ttaagcctgg	gaaacgtcca	gcagtggaga	aacttgagga	1380
cttgttacag	ggtggggacg	gacctttgga	cttgagtaca	cggaaacgtc	caagacaata	1440
agtgttccat	atccgtgttt	acttaagggtg	acgtcaatat	ttgtgtgaga	gtgcaatgta	1500
ataaaaatat	gttaactgtt	cactgggtttt	tattgctttt	tgggcgggga	ctcaggtata	1560
taagtagaag	cagacctgtg	tggttagctc	ataggagctg	gctttcatcc	atggagggtt	1620
gggccatttt	ggaagacctt	aggaagacta	ggcaactgtt	agagagcgct	tcggacggag	1680
tctccggttt	ttggagattc	tggttcgcta	gtgaattage	tagggtagtt	tttaggataa	1740
aacaggacta	taaacaagaa	tttgaaaagt	tggtggtaga	ttgccaggga	ctttttgaag	1800
ctcttaattt	gggccatcag	gttcacttta	aagaaaaagt	tttatcagtt	ttagactttt	1860
caaccccagg	tagaactgct	gctgctgtgg	cttttcttac	ttttatatta	gataaatgga	1920
tcccgcagac	tcatttcagc	aggggatacg	ttttggattt	catagccaca	gcattgtgga	1980
gaacatggaa	ggttcgcaag	atgaggacaa	tcttaggtta	ctggccagtg	cagcctttgg	2040
gtgtagcggg	aatcctgagg	catccaccgg	tcatgccagc	ggttctggag	gaggaacagc	2100
aagaggacaa	cccagagagcc	ggcctggacc	ctccagtgga	ggaggcggag	tagctgactt	2160
gtctcctgaa	ctgcaacggg	tgcttactgg	atctacgtcc	actggacggg	ataggggctg	2220
taagagggag	agggcatcca	gtggtactga	tgctagatct	gagttggctt	taagtttaat	2280
gagtcgcaga	cgtcctgaaa	ccattttggtg	gcatgaggtt	cagaaagagg	gaagggatga	2340
agtttctgta	ttgcaggaga	aatattcact	ggaacaggtg	aaaacatgtt	ggttgaggcc	2400
agaggatgat	tgggcgggtg	ccattaaaaa	ttatgccaa	atagctttga	ggcctgataa	2460
acagtataag	atcagtagac	ggattaatat	ccggaatgct	tggtacatat	ctggaaatgg	2520
ggctgagggtg	gtaatagata	ctcaagacaa	gacagttatt	agatgctgca	tgatggatat	2580
gtggcctgga	gtagtccgta	tggaagcagt	cactttttgta	aatgttaagt	ttaggggaga	2640
tggttataat	ggaatagtgt	ttatggccaa	taccaaaactt	atattgcatg	gtttagactt	2700
ttttggtttc	aacaatacct	gtgtagatgc	ctggggacag	gttagtgtac	gggggtgtag	2760
tttctatgcg	tggttgattg	ccacagctgg	cagaaccaag	agtcaattgt	ctctgaagaa	2820
atgcatattc	caaagatgta	acctgggcat	tctgaatgaa	ggcgaagcaa	gggtccgtca	2880
ctgcgcttct	acagatactg	gatgttttat	tttaattaag	ggaaatgcca	gcgtaaagca	2940
taacatgatt	tgtggtgctt	ccgatgagag	gccttatcaa	atgctcactt	gtgctggtgg	3000
gcattgtaat	atgctggcta	ctgtgcata	tgtttcccat	caacgcacaaa	aatggcctgt	3060
ttttgatcac	aatgtgttga	ccaagtgcac	catgcatgca	ggtgggcgta	gaggaatggt	3120
tatgccttac	cagtgttaaca	tgaatcatgt	gaaagtgttg	ttggaaccag	atgccttttc	3180
cagaatgagc	ctaacaggaa	tctttgacat	gaacacgcaa	atctggaaga	tcctgaggta	3240
tgatgatacg	agatcgaggg	tgcgcgcagt	cgaatgcgga	ggcaagcatg	ccaggttcca	3300
gccggtgtgt	gtagatgtga	ccgaagatct	cagaccggat	catttggtta	ttgcccgcac	3360
tggagcagag	ttcggatcca	gtggagaaga	aactgactaa	ggtgagtatt	gggaaaactt	3420
tggggtggga	ttttcagatg	gacagattga	gtaaaaattt	gttttttctg	tcttgcagct	3480
gacatgagtg	gaaatgcttc	ttttaagggg	ggagtcttca	gcccttatct	gacagggcgt	3540
ctcccatcct	gggcaggagt	tcgtcagaat	gttatgggat	ctactgtgga	tggaagaccc	3600
gttcaacccg	ccaattcttc	aacgctgacc	tatgctactt	taagtctctc	acctttggac	3660
gcagctgcag	ccgctgccgc	cgcctctgtc	gccgctaaca	ctgtgcttgg	aatgggttac	3720
tatggaagca	tcgtggctaa	ttccacttcc	tctaataacc	cttctacact	gactcaggac	3780
aagttacttg	tccttttggc	ccagctggag	gctttgaccc	aacgtctggg	tgaactttct	3840
cagcaggtgg	ccgagttgcg	agtacaaact	gagtctgctg	tcggcacggc	aaagtctaaa	3900
taaaaaaaat	tccagaatca	atgaataaat	aaacgagctt	gttggttgatt	taaaatcaag	3960
tgtttttatt	tcatttttctg	cgcacgggtat	gccctggacc	accgatctcg	atcattgaga	4020
actcgggtgga	ttttttccag	aatcctatag	aggtgggatt	gaatgttttag	atacatgggc	4080
attaggccgt	ctttgggggtg	gagatagctc	cattgaaggg	attcatgctc	cggggtagtg	4140
ttgtaaatca	cccagtcata	acaaggtcgc	agtgcattgt	gttgacacat	atcttttaga	4200
agtaggctga	ttgccacaga	taagcccttg	gtgtaggtgt	ttacaaaccg	gttgagctgg	4260
gaggggtgca	ttcgaggtga	aattatgtgc	attttggatt	ggatttttaa	gttggcaata	4320
ttgccgccaa	gatcccgtct	tgggttcattg	ttatgaagga	ctaccaagac	ggtgtatccg	4380
gtacatttag	gaaatttatc	gtgcagcttg	gatggaaaag	cgtggaaaaa	tttgagagaca	4440
cccttggtgc	ctccgagatt	ttccatgcac	tcatccatga	taatagcaat	ggggccgtgg	4500
gcagcggcgc	gggcaaacac	gttccgtggg	tctgacacat	catagttagt	ttcctgagtt	4560
aaatcatcat	aagccatttt	aatgaatttg	gggcggagcg	taccagattg	gggtatgaat	4620

gttccttcgg	gccccggagc	atagttcccc	tcacagattt	gcatttccca	agctttcagt	4680
tctgaggggtg	gaatcatgtc	cacctggggg	gctatgaaga	acaccgtttc	gggggagggg	4740
gtgattagtt	gggatgatag	caagtttctg	agcaattgag	atttgccaca	tccggtgggg	4800
ccataaataa	ttccgattac	aggttgcagg	tggtagttaa	gggaacggca	actgccgtct	4860
tctcgaagca	agggggccac	ctcgttcate	atttccctta	catgcatatt	ttcccgcacc	4920
aatccatta	ggaggcgctc	tcctcctagt	gatagaagtt	cttgtagtga	ggaaaagttt	4980
ttcagcgggt	ttagaccgtc	agccatgggc	attttggaaa	gagtttgctg	caaaagttct	5040
agtctgttcc	acagttcagt	gatgtgttct	atggcatctc	gatccagcag	acctcctcgt	5100
ttcgcggggt	tggacggctc	ctggagtagg	gtatgagacg	atgggcgctc	agcgctgcca	5160
gggttcgggtc	cttccagggt	ctcagtgttc	gagtcagggt	tgtttccgtc	acagtgaagg	5220
ggtgtgcgcc	tgcttggggc	cttgccaggg	tgcgcttcag	actcattctg	ctggtggaga	5280
acttctgtcg	cttggcgccc	tgtatgtcgg	ccaagtagca	gtttaccatg	agttcgtagt	5340
tgagcgctc	ggctgcgtgg	cctttggcgc	ggagcttacc	tttggaagtt	ttcttgcata	5400
ccgggcagta	taggcatttc	agcgcataca	gcttgggcgc	aaggaaaatg	gattctgggg	5460
agtatgcate	cgcgccgcag	gaggcgcaaa	cagtttcaca	ttccaccagc	caggttaaata	5520
ccggttcatt	gggtcaaaa	acaagtttct	cgccatattt	tttgatgcgt	ttcttacctt	5580
tggctctccat	aagttcgtgt	cctcgttgag	tgacaaacag	gctgtccgta	tctccgtaga	5640
ctgattttac	aggcctcttc	tccagtggag	tgcctcggtc	ttcttcgtac	aggaactctg	5700
accactctga	tacaaaggcg	cgcgctccagg	ccagcacaaa	ggaggctatg	tgggaggggt	5760
agcgatcggt	gtcaaccagg	gggtccacct	tttccaaagt	atgcaaacac	atgtcaccct	5820
cttcaacatc	caggaatgtg	attggcttgt	agggtgattt	cacgtgacct	gggggtccccg	5880
ctgggggggt	ataaaagggg	gcggttcttt	gctcttcctc	actgtcttcc	ggatcgctgt	5940
ccaggaaagt	cagctgttgg	ggtaggtatt	ccctctcgaa	ggcgggcatg	acctctgcac	6000
tcaggttgtc	agtttctaag	aacgaggagg	atttgatatt	gacagtgccg	gttgagatgc	6060
ctttcatgag	gttttcgtcc	atttggtcag	aaaacacaa	ttttttattg	tcaagtttgg	6120
tggcaaatga	tccatacagg	gcgttgata	aaagtttggc	aatggatcgc	atggtttggg	6180
tcttttccct	gtccgcgcgc	tctttggcgg	cgatgttgag	ttggacatac	tcgcgtgcca	6240
ggcacttcca	ttcgggggaag	atagttgtta	attcatctgg	cacgattctc	acttgccacc	6300
ctcgattatg	caaggtaatt	aatccacac	tgggtggccac	ctcgcctcga	aggggttcat	6360
tgggtccaaca	gagcctacct	cctttcctag	aacagaaagg	gggaagtggg	tctagcataa	6420
gttcatcggt	agggtctgca	tccatggtaa	agattcccgg	aagtaaatac	ttatcaaaat	6480
agctgatggg	agtgggggtca	tctaaggcca	tttgccattc	tcgagctgcc	agtgcgcgct	6540
catatgggtt	aaggggactg	ccccagggca	tgggatgggt	gagagcagag	gcatacatgc	6600
cacagatgtc	atagacgtag	atgggatcct	caaagatgcc	tatgtagggt	ggatagcatc	6660
gccccctct	gatacttgct	cgcacatagt	catatagttc	atgtgatggc	gctagcagcc	6720
ccggacccaa	gttgggtgca	ttgggttttt	ctgttctgta	gacgatctgg	cgaaagatgg	6780
cgtgagaatt	ggaagagatg	gtgggtcttt	gaaaaatgtt	gaaatgggca	tgaggtagac	6840
ctacagagtc	tctgacaaag	tgggcataag	attcttgaag	cttgggttacc	agttcggcgg	6900
tgacaagtac	gtctagggcg	cagtagtcaa	gtgtttcttg	aatgatgtca	taacctggtt	6960
ggtttttctt	ttcccacagt	tcgcggttga	gaaggatttc	ttcgcgatcc	ttccagtact	7020
cttctagcgg	aaaccegtct	ttgtctgcac	ggtaagatcc	tagcatgtag	aactgattaa	7080
ctgccttgta	agggcagcag	cccttctcta	cgggtagaga	gtatgcttga	gcagcttttc	7140
gtagcgaagc	gtgagtaagg	gcaaagggtg	ctctgaccat	gactttgaga	aattgggtatt	7200
tgaagtccat	gtcgtcacag	gctccctggt	cccagagttg	gaagtctacc	cgtttcttgt	7260
aggcggggtt	gggcaaagcg	aaagtaacat	cattgaagag	aatcttaccg	gctctgggca	7320
taaaattgcg	agtgatgcgg	aaaggctgtg	gtacttccgc	tcgattgttg	atcacctggg	7380
cagctaggac	gatttcgtcg	aaaccgttga	tgttgtgtcc	tacgatgtat	aattctatga	7440
aacgcggcgt	gcctctgacg	tgaggtagct	tactgagctc	atcaaagggt	aggctctgtg	7500
ggtcagataa	ggcgtagtgt	tcgagagccc	attcgtgcag	gtgaggattt	gcatgtagga	7560
atgatgacca	aagatctacc	gccagtgtgt	tttgtaactg	gtcccagatac	tgacgaaaat	7620
gccggccaat	tgccattttt	tctggagtga	cacagtagaa	ggttctgggg	tcttgttgcc	7680
atcgatccca	cttgagttta	atggctagat	cgtgggccat	gttgacgaga	cgctcttctc	7740
ctgagagttt	catgaccagc	atgaaaggaa	ctagtgtgtt	gccaaaggat	cccatccagg	7800
tgtaaagttt	cacatcgtag	gtcaggaaga	gtctttctgt	gcgaggatga	gagccgatcg	7860
ggaagaactg	gatttcctgc	caccagttgg	aggattggct	gttgatgtga	tggaagtaga	7920
agtttctgcg	gcgcgccgag	cattcgtgtt	tgtgcttgta	cagacggccg	cagtagtcgc	7980
agcgttgca	gggttgatc	tcgtgaatga	gctgtacctg	gcttcccttg	acgagaaatt	8040
tcagtgggaa	gccgaggcct	ggcgattgta	tctcgtgctc	ttctatatct	gctgtatcgg	8100
cctgttcate	ttctgtttcg	atgggtggta	tgtgacgag	ccccgcggg	aggcaagtcc	8160
agacctcggc	gcgggagggg	cggagctgaa	ggacgagagc	gcgcaggctg	gagctgtcca	8220
gagtcctgag	acgctgcgga	ctcaggttag	taggtaggga	cagaagatta	acttgcatga	8280
tcttttccag	ggcgtgcggg	aggttcagat	ggtaactgat	ttccacaggt	tcgtttgtag	8340

agacgtcaat	ggcttgcagg	gttccgtgtc	ctttgggcgc	cactaccgta	cctttgtttt	8400
ttcttttgat	cggtggtggc	tctcttgctt	cttgcattgt	cagaagcggg	gacgggggacg	8460
cgcgccgggc	ggcagcgggt	gttccggacc	cgggggcatg	gctggtagt	gcacgtcggc	8520
gccgcgcacg	ggcaggttct	ggtattgcgc	tctgagaaga	cttgcgtgcg	ccaccacgcg	8580
tcgattgacg	tcttgatatc	gacgtctctg	ggtgaaagct	accggccccg	tgagcttgaa	8640
cctgaaagag	agttcaacag	aatcaatttc	ggtatcgtaa	acggcagctt	gtctcagtat	8700
ttcttgtagc	tcaccagagt	tgctctggta	ggcgatctcc	gccatgaact	gctcgatttc	8760
ttcctcctga	agatctccgc	gacccgctct	ttcgacgggt	gccgcgaggt	cattggagat	8820
acggcccatg	agttgggaga	atgcattcat	gcccgcctcg	ttccagacgc	ggctgtaaac	8880
cacggccccc	tcggagtctc	ttgcgcgcac	caccacctga	gcgaggttaa	gctccacgtg	8940
tctggtgaag	accgcatagt	tgcataggcg	ctgaaaaaag	tagttgagt	tggtggcaat	9000
gtgttcggcg	acgaagaaat	acatgatcca	tctgtctcagc	ggcatttcgc	taacatcgcc	9060
cagagcttcc	aagcgtcca	tggcctcgta	gaagtccacg	gcaaaattaa	aaaactggga	9120
gtttcgcgcg	gacacgggtc	attcctcctc	gagaagacgg	atgagttcgg	ctatggtggc	9180
ccgtacttcg	cgttcgaagg	ctcccgggat	ctcttcttcc	tcttctatct	cttcttccac	9240
taacatctct	tcttcgtctt	caggcggggg	cggagggggc	acgcggcgac	gtcgacggcg	9300
cacgggcaaa	cggtcgatga	atcgttcaat	gacctctccg	cggcggcggc	gcatggtttc	9360
agtgcggcg	cggccgttct	cgcgcggtcg	cagagtaaaa	acaccgcgcg	gcatctcctt	9420
aaagtgggtga	ctgggaggtt	ctccgttttg	gagggagagg	gcgctgatta	tacattttat	9480
taattggccc	gtagggactg	cgcgcagaga	tctgatcgtg	tcaagatcca	cgggatctga	9540
aaacctttcg	acgaaagcgt	ctaaccagtc	acagtcacaa	ggtaggctga	gtacggcttc	9600
ttgtgggchg	gggtggttat	gtgttcggtc	tgggtcttct	gtttcttctt	catctcggga	9660
aggtgagacg	atgctgctgg	tgatgaaatt	aaagtaggca	gttctaagac	ggcggatggt	9720
ggcgaggagc	accaggtctt	tgggtccggc	ttgctggata	cgcaggcgat	tggccattcc	9780
ccaagcatta	tcttgacatc	tagcaagatc	ttttagtag	tcttgcatga	gccgttctac	9840
gggcacttct	tcttcacccg	ttctgccatg	catacgtgtg	agtccaaatc	cgcgcattgg	9900
ttgtaccagt	gccaagtcat	ctacgactct	ttcggcgagg	atggcttgct	gtacttgggt	9960
aagggtggct	tgaaagtcat	caaaatccac	aaagcgggtg	taagcccctg	tattaatggt	10020
gtaagcacag	ttggccatga	ctgaccagtt	aactgtctgg	tgaccagggc	gcacgagctc	10080
ggtgtattta	aggcgcgaat	aggcgcgggt	gtcaaagatg	taatcgttgc	aggtgcgcac	10140
cagatactgg	taccctataa	gaaaatgcgg	cgggtggttg	cggtagagag	gccatcgttc	10200
tgtagctgga	gcgccagggg	cgaggtcttc	caacataagg	cggtagatagc	cgtagatgta	10260
cctggacatc	caggtgattc	ctgcggcggt	agtagaagcc	cagaggaaact	cgcgtacgcg	10320
gttccaaatg	ttgcgtagcg	gcatgaagta	gttcattgta	ggcacggttt	gaccagtga	10380
gcgcgcgcag	tcattgatgc	tctatagaca	cggagaaaat	gaaagcgttc	agcgactcga	10440
ctccgtagcc	tggaggaacg	tgaacgggtt	gggtcgcggt	gtaccccggt	tcgagacttg	10500
tactcgagcc	ggccggagcc	gcggctaacg	tgggtattggc	actcccgtct	cgacccagcc	10560
tacaaaaatc	caggatacgg	aatcgagtcg	ttttgctggt	ttccgaatgg	caggggaagt	10620
agtcctatct	tttttttttt	tttgccgctc	agatgcattc	cgtgctgcga	cagatgcgcc	10680
cccaacaaca	gccccctcg	cagcagcagc	agcagcaacc	acaaaaggct	gtccctgcaa	10740
ctactgcaac	tgccgccgtg	agcgggtgcg	gacagcccgc	ctatgatctg	gacttggaag	10800
agggcgaagg	actggcacgt	ctaggtgcgc	cttcgcccga	gcggcatccg	cgagttcaac	10860
tgaaaaaaga	ttctcgcgag	gcgtatgtgc	cccaacagaa	cctatttaga	gacagaagcg	10920
gcgaggagcc	ggaggagatg	cgaacttccc	gctttaacgc	gggtcgtgag	ctgcgtcacg	10980
gtttggaccg	aagacgagtg	ttgcgagacg	aggatttcga	agttgatgaa	gtgacaggga	11040
tcagtcctgc	cagggcacac	gtggctgcag	ccaaccttgt	atcggcttac	gagcagacag	11100
taaaggaaga	gcgtaaactt	caaaagtctt	ttaataatca	tgtgcgaacc	ctgattgccc	11160
gcgaagaagt	tacccttggt	ttgatgcatt	tgtgggattt	gatggaagct	atcattcaga	11220
accctactag	caaacctctg	accgcccagc	tgtttctggt	ggtgcaacac	agcagagaca	11280
atgaggcttt	cagagaggcg	ctgctgaaca	tcaccgaacc	cagggggaga	tggttgatat	11340
atcttatcaa	cattctacag	agtatcatag	tgaggagcgc	gagcctgggc	ctggccgaga	11400
aggtagctgc	catcaattac	tcggttttga	gcttgggaaa	atattacgct	cgcaaaatct	11460
acaagactcc	atacgttccc	atagacaagg	agggtgaagat	agatgggttc	tacatgcgca	11520
tgacgtctca	ggtcttgacc	ctgagcgatg	atcttggggg	gtatcgcaat	gacagaatgc	11580
atcgcgcggt	tagcgccagc	aggaggcgcg	agttaagcga	cagggaaactg	atgcacagtt	11640
tgcaaaagag	tctgactgga	gctggaaccg	agggtgagaa	ttacttcgac	atgggagctg	11700
acttgacagt	gcagcctagt	cgcaggggctc	tgagcgccgc	gacggcagga	tgtgagcttc	11760
cttacataga	agaggcggat	gaaggcgagg	aggaagaggg	cgagtacttg	gaagactgat	11820
ggcacaaccc	gtgttttttg	ctagatggaa	cagcaagcac	cggatcccgc	aatgcggggc	11880
gcgctgcaga	gccagccgtc	cggcattaac	tcctcggacg	attggaccca	ggccatgcaa	11940
cgtatcatgg	cgttgacgac	tcgcaacccc	gaagccttta	gacagcaacc	ccaggccaac	12000
cgtctatcgg	ccatcatgga	agctgtagtg	ccttcccgat	ctaattccac	tcattgagaag	12060

gtcctggcca	tcgtgaacgc	gttggtggag	aacaaagcta	ttcgtccaga	tgaggccgga	12120
ctggtataca	acgctctctt	agaacgcgtg	gctcgcctaca	acagtagcaa	tgtgcaaacc	12180
aatttgacc	gtatgataac	agatgtacgc	gaagccgtgt	ctcagcgcg	aaggttccag	12240
cgtgatgcca	acctgggttc	gctggtggcg	ttaaagtctt	tcttgagtac	tcagcctgct	12300
aatgtgccgc	gtggtcaaca	ggattatact	aactttttta	gtgctttgag	actgatggta	12360
tcagaagtac	ctcagagcga	agtgtatcag	tccggtcctg	attacttctt	tcagactagc	12420
agacagggct	tgcagacggt	aaatctgagc	caagctttta	aaaaccttaa	aggtttgtgg	12480
ggagtgcctg	ccccggtagg	agaaagagca	accgtgtcta	gcttggttaac	tccgaactcc	12540
cgctgttat	tactgttggt	agctcctttc	accgacagcg	gtagcatcga	ccgtaattcc	12600
tatttggtt	acctaactaa	cctgtatcgc	gaagccatag	ggcaaagtca	ggtggacgag	12660
cagacctatc	aagaaattac	ccaagtcagt	cgcgcttttg	gacaggaaga	cactggcagt	12720
ttggaagcca	ctctgaactt	cttgcttacc	aatcggtctc	aaaagatccc	tcctcaatat	12780
gctcttactg	cggaggagga	gaggatcctt	agatatgtgc	agcagagcgt	gggattgttt	12840
ctgatgcaag	agggggcaac	tccgactgca	gcactggaca	tgacagcgcg	aaatatggag	12900
cccagcatgt	atgccagtaa	ccgacctttc	attaacaaac	tgctggacta	cttgcacaga	12960
gctgccgcta	tgaactctga	ttatttcacc	aatgccatct	taaacccgca	ctggctgccc	13020
ccacctgggt	tctacacggg	cgaatatgac	atgcccagacc	ctaatagacg	atttctgttg	13080
gacgacgtgg	acagcgatgt	tttttcacct	ctttctgatc	atcgacgtg	gaaaaaggaa	13140
ggcgggtgata	gaatgcattc	ttctgcatcg	ctgtccgggg	tcatgggtgc	taccgcggt	13200
gagcccgagt	ctgcaagtcc	ttttcctagt	ctacctttt	ctctacacag	tgtacgtagc	13260
agcgaagtgg	gtagaataag	tgcgccgagt	ttaatgggcg	aagaggagta	cctaaacgat	13320
tccttgctca	gaccggcaag	agaaaaaat	ttcccaaaca	atggaataga	aagtttggtg	13380
gataaaatga	gtagatggaa	gacttatgct	caggatcaca	gagacgagcc	tgggatcatg	13440
gggactacaa	gtagagcgag	ccgtagacgc	cagcgccatg	acagacagag	gggtcttggt	13500
tgggacgatg	aggattcggc	cgatgatagc	agcgtgttgg	acttggttgg	gagaggaagg	13560
ggcaacccgt	ttgctcattt	gcgccctcgc	ttgggttggt	tgttggtgaa	aaaaataaaa	13620
aagaaaaact	caccaaggcc	atggcgacga	gcgtacgttc	gttcttcttt	attatctgtg	13680
tctagtataa	tgaggcgagt	cgtgctaggg	ggagcggtgg	tgtatccgga	gggtcctcct	13740
ccttcgtacg	agagcgatgt	gcagcagcag	caggcgacgg	cggtgatgca	atccccactg	13800
gaggctccct	ttgtgcctcc	gcgataacctg	gcacctacgg	agggcagaaa	cagcattcgt	13860
tactcggaac	tggcacctca	gtacgatacc	accaggttgt	atctggtgga	caacaagtgc	13920
gcggacattg	cttctctgaa	ctatcagaat	gaccacagca	acttcttgac	cacggtggtg	13980
cagaacaatg	actttacccc	tacggaagcc	agcaccagca	ccattaactt	tgatgaacga	14040
tcgcggtggg	gcggtcagct	aaagaccatc	atgcatacta	acatgccaaa	cgtgaacgag	14100
tatatgttta	gtaacaagtt	caaagcgctg	gtgatgggtg	ccagaaaacc	tcccgcaggt	14160
gctgcagttg	gggatactta	tgatcacaag	caggatattt	tggaaataga	gtggttcgag	14220
tttactttgc	cagaaggcaa	cttttcagtt	actatgacta	ttgatttgat	gaacaatgcc	14280
atcatagata	attacttgaa	agtgggtaga	cagaatggag	tgcttgaaag	tgacattggt	14340
gttaagtctg	acaccaggaa	cttcaagctg	ggatgggatc	ccgaaaccaa	gttgatcatg	14400
cctggagtgt	atacgtatga	agccttccat	cctgacattg	tcttactgcc	tggctgcgga	14460
gtggatttta	ccgagagtcg	tttgagcaac	cttcttggtg	tcagaaaaaa	acagccattt	14520
caagaggggt	ttaagatttt	gtatgaagat	ttagaagggt	gtaatatcc	ggccctcttg	14580
gatgtagatg	cctatgagaa	cagtaagaaa	gaacaaaaag	ccaaaataga	agctgctaca	14640
gctgctgcag	aagctaaggc	aaacatagtt	gccagcgact	ctacaagggt	tgctaacgct	14700
ggagaggtca	gaggagacaa	ttttgcgcca	acacctgttc	cgactgcaga	atcattattg	14760
gccgatgtgt	ctgaaggaac	ggacgtgaaa	ctcactattc	aacctgtaga	aaaagatagt	14820
aagaatagaa	gctataatgt	gttggaagac	aaaatcaaca	cagcctatcg	cagttggtat	14880
ctttcgtaca	attatggcga	tcccgaaaaa	ggagtgcgtt	cctggacatt	gctcaccacc	14940
tcagatgtca	cctgcggagc	agagcaggtt	tactggtcgc	ttccagacat	gatgaaggat	15000
cctgtcactt	tccgctccac	tagacaagtc	agtaactacc	ctgtggtggg	tgcagagctt	15060
atgcccgtct	tctcaaagag	cttctacaac	gaacaagctg	tgtactccca	gcagctccgc	15120
cagtccacct	cgcttacgca	cgtcttcaac	cgctttcctg	agaaccagat	tttaatccgt	15180
ccgcccggcg	ccaccattac	caccgtcagt	gaaaacgttc	ctgctctcac	agatcacggg	15240
accctgccgt	tgcgcagcag	tatccgggga	gtccaacgtg	tgaccgttac	tgacgccaga	15300
cgccgcacct	gtccctacgt	gtacaaggca	ctgggcatag	tcgcaccgcg	cgctccttca	15360
agccgcactt	tctaaaaaaa	aaaaatgtcc	attcttatct	cgcccagtaa	taacaccggt	15420
tggggtctgc	gcgctccaag	caagatgtac	ggaggcgcac	gcaaacgttc	taccacaacat	15480
cccgtgcgtg	ttcgcggaca	ttttcgcgct	ccatgggggtg	ccctcaaggg	ccgcactcgc	15540
gttcgaacca	ccgtcgatga	tgtaatcgat	cagggtggtg	ccgacgcccg	taattatact	15600
cctactgcgc	ctacatctac	tgtggatgca	gttattgaca	gtgtagtggc	tgacgctcgc	15660
aactatgctc	gacgtaagag	ccggcggaagg	cgcatcgcca	gacgccaccg	agctaccact	15720
gccatgcgag	ccgcaagagc	tctgctacga	agagctagac	gcgtggggcg	aagagccatg	15780

cttagggcgg	ccagacgtgc	agcttcgggc	gccagcgccg	gcaggtcccg	caggcaagca	15840
gccgctgtcg	cagcggcgac	tattgccgac	atggcccaat	cgcgagagg	caatgtatac	15900
tgggtgcgtg	acgtgccac	cgggtcaacgt	gtacccgtgc	gcacccgtcc	ccctcgcact	15960
tagaagatac	tgagcagtct	ccgatgttgt	gtcccagcgg	cgaggatgtc	caagcgcaaa	16020
tacaaggaag	aaatgctgca	ggttatcgca	cctgaagtct	acggccaacc	gttgaaggat	16080
gaaaaaaaaac	cccgcaaaat	caagcggggt	aaaaaggaca	aaaaagaaga	ggaagatggc	16140
gatgatgggc	tggcggagtt	tgtgcgcgag	tttgccccac	ggcgacgcgt	gcaatggcgt	16200
gggcgcaaag	ttcgacatgt	gttgagacct	ggaacttcgg	tggtctttac	acccggcgag	16260
cgttcaagcg	ctacttttaa	gcgttcctat	gatgaggtgt	acggggatga	tgatattctt	16320
gagcaggcgg	ctgaccgatt	aggcgagttt	gcttatggca	agcgtagtag	aataacttcc	16380
aaggatgaga	cagtgtcaat	acccttggat	catggaaatc	ccacccctag	tcttaaaccg	16440
gtcactttgc	agcaagtgtt	acccgtaact	ccgcgaacag	gtgttaaacy	cgaaggtgaa	16500
gatttgtatc	ccactatgca	actgatggta	cccaaaccgc	agaagtggga	ggacgttttg	16560
gagaaagtaa	aagtggatcc	agatattcaa	cctgaggtta	aagtgagacc	cattaagcag	16620
gtagcgcttg	gtctgggggt	acaaactgta	gacattaaga	ttcccactga	aagtatggaa	16680
gtgcaaactg	aacccgcaaa	gcctactgcc	acctccactg	aagtgcaaac	ggatccatgg	16740
atgcccatgc	ctattacaac	tgacgccgcc	ggtcccactc	gaagatcccg	acgaaagtac	16800
ggtccagcaa	gtctgttgat	gcccattat	gttgtagacc	catctattat	tcctactcct	16860
ggttaccgag	gcactcgcta	ctatcgagc	cgaaacagta	cctcccgcgg	tcgcccgaag	16920
acacctgcaa	atcgagtcg	tcgcccgtaga	cgacaagca	aaccgactcc	cggcgccctg	16980
gtgcggcaag	tgtaccgcaa	tggtagtgcg	gaacctttga	cactgccgcg	tgcgcgttac	17040
catccgagta	tcatacactta	atcaatgttg	ccgctgcctc	cttgagata	tggccctcac	17100
ttgtcgctt	cgcgttccca	tcactgggta	ccgaggaaga	aactcgcgcc	gtagaagagg	17160
gatgttggga	cgcggaatgc	gacgctacag	gcgacggcgt	gctatccgca	agcaattgcg	17220
gggtggtttt	ttaccagcct	taattccaat	tatcgctgct	gcaattggcg	cgataccagg	17280
catagcttcc	gtggcggttc	aggcctcgca	acgacattga	cattggaaaa	aaaacgtata	17340
aataaaaaaa	aatacaatgg	actctgacac	tcctgggtcct	gtgactatgt	tttcttagag	17400
atggaagaca	tcaatttttc	atccttgggt	ccgcgacacg	gcacgaagcc	gtacatgggc	17460
acctggagcg	acatcggcac	gagccaactg	aacggggggc	ccttcaattg	gagcagtatc	17520
tggagcgggc	ttaaaaattt	tggtcaacc	ataaaaacat	acgggaacaa	agcttggaa	17580
agcagtacag	gacaggcgct	tagaaataaa	cttaaagacc	agaacttcca	acaaaaagta	17640
gtcgatggga	tagcttccgg	catcaatgga	gtggtagatt	tggctaacca	ggctgtgcag	17700
aaaaagataa	acagtcgttt	ggacccgccc	ccagcaaccc	caggtgaaat	gcaagtggag	17760
gaagaaattc	ctccgccaga	aaaacgaggg	gacaagcgtc	cgcgctccga	tttggaagag	17820
acgtggtga	cgcgcgtaga	tgaaccgcct	tcttatgagg	aagcaacgaa	gcttggaaatg	17880
cccaccacta	gaccgatagc	cccaatggcc	accgggggtga	tgaaccttc	tcagttgcat	17940
cgacccgtca	ccttggattt	gccccctccc	cctgctgcta	ctgctgtacc	cgcttctaag	18000
cctgtcgctg	ccccgaaacc	agtcgccgta	gccaggtcac	gtcccggggg	cgctcctcgt	18060
ccaaatgctc	actggcaaaa	tactctgaac	agcatcgtgg	gtctaggcgt	gcaaagtgtg	18120
aaacgccgtc	gctgctttta	attaaatatg	gagtagcgct	taacttgcct	atctgtgtat	18180
atgtgtcatt	acacgccgtc	acagcagcag	aggaaaaaag	gaagaggctc	tgcgtcgacg	18240
ctgagttact	ttcaagatgg	ccaccccatc	gatgctgccc	caatgggcat	acatgcacat	18300
cgccggacag	gatgcttcgg	agtacctgag	tcggggtctg	gtgcagttcg	cccgcgccac	18360
agacacctac	ttcaatctgg	gaaataagtt	tagaaatccc	accgtagcgc	cgacccacga	18420
tgtgaccacc	gaccgtagcc	agcggtcat	gttgcgcttc	gtgcccgttg	accgggagga	18480
caatacatat	tcttacaaag	tgcggtacac	cctggccgtg	ggcgacaaca	gagtgtgga	18540
tatggccagc	acgttctttg	acattagggg	cgtgttggac	agaggtccca	gtttcaaacc	18600
ctattctggt	acggcttaca	actctctggc	tcctaaaggc	gtccaaatg	catctcaatg	18660
gattgcaaaa	ggcgtagcaa	ctgcagcagc	cgagggcaat	ggtgaagaag	aacatgaaac	18720
agaggagaaa	actgctactt	acacttttgc	caatgctcct	gtaaaagccg	aggctcaaat	18780
tacaaaagag	ggcttaccaa	taggttttga	gatttcagct	gaaaacgaat	ctaaacccat	18840
ctatgcagat	aaactttatc	agccagaacc	tcaagtggga	gatgaaactt	ggactgacct	18900
agacggaaaa	accgaagagt	atggaggcag	ggctctaaag	cctactacta	acatgaaacc	18960
ctgttacggg	tcctatgcga	agcctactaa	tttaaaagggt	ggtcaggcaa	aaccgaaaaa	19020
ctcggaaccg	tcgagtgaag	aaattgaata	tgatattgac	atggaatttt	ttgataactc	19080
atcgcaaaga	acaaacttca	gtcctaaaat	tgtcatgtat	gcagaaaatg	taggttttga	19140
aacgccagac	actcatgtag	tgtacaaacc	tggaaacagaa	gacacaagtt	ccgaagctaa	19200
tttgggacaa	cagtctatgc	ccaacagacc	caactacatt	ggcttcagag	ataactttat	19260
tggactcatg	tactataaca	gtactggtaa	catgggggtg	ctggctggtc	aagcgtctca	19320
gttaaagtca	gtgggtgact	tgaggagacg	aaacacagaa	ctttcttacc	aactcttgct	19380
tgactctctg	ggcgacagaa	ccagataactt	tagcatgtgg	aatcaggctg	tggacagtta	19440
tgatcctgat	gtacgtgtta	ttgaaaatca	tggtgtggaa	gatgaacttc	ccaactattg	19500

ttttccactg	gacggcatag	gtgttccaac	aaccagttac	aatcaatag	ttccaaatgg	19560
agaagataat	aataattgga	aagaacctga	agtaaatgga	acaagtgaga	tcggacaggg	19620
taatttggtt	gccatggaaa	ttaaccttca	agccaatcta	tggcgaagtt	tcctttattc	19680
caatgtggct	ctgtatctcc	cagactcgta	caaatacacc	ccgtccaatg	tcactcttcc	19740
agaaaacaaa	aacacctacg	actacatgaa	cgggcgggtg	gtgccgccat	ctctagtaga	19800
cacctatgtg	aacattgggtg	ccaggtgggtc	tctggatgcc	atggacaatg	tcaacccatt	19860
caaccaccac	cgtaacgctg	gcttgcggtta	ccgatctatg	cttctgggta	acggacgtta	19920
tgtgcctttc	cacatacaag	tgcttcaaaa	attcttcgct	gttaaaaacc	tgctgcttct	19980
cccaggctcc	tacacttatg	agtggaaactt	taggaaggat	gtgaacatgg	ttctacagag	20040
ttccctcggt	aacgacctgc	gggtagatgg	cgccagcatc	agtttcacga	gcatacaact	20100
ctatgctact	tttttcccca	tggttcacaa	caccgcttcc	acccttgaag	ccatgctgcg	20160
gaatgacacc	aatgatcagt	cattcaacga	ctacctatct	gcagctaaca	tgctctaccc	20220
cattcctgcc	aatgcaacca	atattcccat	ttccattcct	tctcgcaact	gggcggcttt	20280
cagaggctgg	tcattttacca	gactgaaaac	caaagaaact	ccctcttttg	ggtctggatt	20340
tgacccttac	tttgtctatt	ctggttctat	tccttacctg	gatggtacct	tctacctgaa	20400
ccacactttt	aagaagggtt	ccatcatggt	tgactcttca	gtgagctggc	ctggaaatga	20460
caggttacta	tctcctaacg	aatttgaaat	aaagcgcact	gtggatggcg	aaggctacaa	20520
cgtagcccaa	tgcaacatga	ccaaagactg	gttcttggtg	cagatgctcg	ccaactacaa	20580
catcggtat	cagggttct	acattccaga	aggatacaaa	gatcgcatgt	attcattttt	20640
cagaaacttc	cagcccatga	gcaggcaggt	ggttgatgag	gtcaattaca	aagacttcaa	20700
ggccgtcgcc	ataccctacc	aacacaacaa	ctctggcttt	gtgggttaca	tggctccgac	20760
catgcgccaa	ggtcaaccct	atcccgtctaa	ctatccctat	ccactcattg	gaacaactgc	20820
cgtaaatagt	gttacgcaga	aaaagtctct	gtgtgacaga	accatgtggc	gcataaccgt	20880
ctcgagcaac	ttcatgtcta	tgggggccct	tacagacttg	ggacagaata	tgctctatgc	20940
caactcagct	catgctctgg	acatgacctt	tgaggtggat	cccatggatg	agcccaccct	21000
gctttatctt	ctcttcgaag	ttttcgacgt	ggtcagagt	catcagccac	accgcggcat	21060
catcgaggca	gtctacctgc	gtacaccgtt	ctcggccggt	aacgctacca	cgtaagaagc	21120
ttcttgcttc	ttgcaaatag	cagctgcaac	catggcctgc	ggatcccaaa	acggctccag	21180
cgagcaagag	ctcagagcca	ttgtccaaga	cctgggttgc	ggaccctatt	ttttgggaac	21240
ctacgataag	cgcttcccgg	ggttcatggc	ccccgataag	ctcgcctgtg	ccattgtaaa	21300
tacggccgga	cgtgagacgg	ggggagagca	ctgggttggt	ttcgggttga	accacagttc	21360
taacacctgc	tacctttttg	atcctttttg	attctcggat	gatcgtctca	aacagattta	21420
ccagtttgaa	tatgagggtc	tcttgcgcgc	cagcgtctct	gctaccaagg	accgctgtat	21480
tacgctggaa	aatcttacc	agaccgtgca	gggcccccg	tctgccgcct	gcggactttt	21540
ctgctgcatg	ttccttcacg	cctttgtgca	ctggcctgac	cgccccatgg	acggaaaccc	21600
caccatgaaa	ttgctaactg	gagtgccaaa	caacatgctt	cattctccta	aagtccagcc	21660
caccctgtgt	gacaatcaaa	aagcactcta	ccattttctt	aataccatt	cgccttattt	21720
tcgctctcat	cgtacacaca	tcgaaagggc	cactgcgttc	gaccgtatgg	atgttcaata	21780
atgactcatg	taaacaacgt	gttcaataaa	catcacttta	tttttttaca	tgtatcaagg	21840
ctctggatta	cttattttatt	tacaagtcga	atgggttctg	acgagaatca	gaatgacccg	21900
caggcagtga	tacgttgccg	aactgatact	tgggttgcca	cttgaattcg	ggaatcacca	21960
acttggaac	cggatatatc	ggcaggatgt	cactccacag	ctttctgggtc	agctgcaaag	22020
ctccaagcag	gtcaggagcc	gaaatcttga	aatcacatt	aggaccagt	ctctgagcgc	22080
gagagtggcg	gtacaccgga	ttgcagcact	gaaacaccat	cagcgacgga	tgtctcacgc	22140
ttgccagcac	ggtgggatct	gcaatcatgc	ccacatccag	atcttcagca	ttggcaatgc	22200
tgaacgggg	catcttgacg	gtctgcctac	ccatggcggg	cacccaatta	ggcttgtgg	22260
tgcaatcgca	gtgcaggggg	atcagtatca	tcttggcctg	atcctgtctg	attcctggat	22320
acacggctct	catgaaagca	tcatattgct	tgaaagcctg	ctgggcttta	ctaccctcgg	22380
tataaaacat	cccgcaggac	ctgctcgaaa	actggtttagc	tgcacagccg	gcatacattca	22440
cacagcagcg	ggcgtcattg	ttggctattt	gcaccacact	tctgccccag	cggttttggg	22500
tgattttgg	tcgctcggga	ttctccttta	aggctcgttg	tccgttctcg	ctggccacat	22560
ccatctcgat	aatctgctcc	ttctgaatca	taatattgcc	atgcaggcac	ttcagcttgc	22620
cctcataatc	attgcagcca	tgaggccaca	acgcacagcc	tgtacattcc	caattatggt	22680
ggcgatctg	agaaaaagaa	tgtatcattc	cctgcagaaa	tcttcccatc	atcgtgctca	22740
gtgtcttggt	actagtga	gttaactgga	tgctcgggtg	ctcttcggtt	acgtactggt	22800
gacagatg	cttgattgt	tcgtgttgct	caggcattag	tttaaaacag	gttctaagtt	22860
cgttatccag	cctgtacttc	tccatcagca	gacacatcac	ttccatgcct	ttctcccaag	22920
cagacaccag	gggcaagcta	atcggattct	taacagtga	ggcagcagct	ccttttagcca	22980
gagggtcac	tttagcgatc	ttctcaatgc	ttcttttgcc	atccttctca	acgatgcgca	23040
cgggcgggta	gctgaaaccc	actgctacaa	gttgccgctc	ttctctttct	tcttcgctgt	23100
cttgactgat	gtcttgcatg	gggatatgtt	tggtcttctt	tggcttcttt	ttggggggta	23160
tcggaggagg	aggactgtcg	ctccgttccg	gagacagggg	ggattgtgac	gtttcgcctca	23220

ccattaccaa	ctgactgtcg	gtagaagaac	ctgacccccc	acggcgacag	gtgtttttct	23280
tggggggcag	aggtggaggg	gattgagaag	ggctgcgggc	cgacctggaa	ggcggatgac	23340
tggcagaacc	ccttccgcgt	tgggggggtg	gctccctgtg	gcggtcgctt	aactgatttc	23400
cttcgcggct	ggccattgtg	ttctcctagg	cagagaaaca	acagacatgg	aaactcagcc	23460
attgctgtca	acatcgccac	gagtgccatc	acatctcgtc	ctcagcgacg	aggaaaagga	23520
gcagagctta	agcattccac	cgcccagtc	tgccaccacc	tctaccctag	aagataagga	23580
ggctgcagca	tctcatgaca	tgcagaataa	aaaagcgaaa	gagtctgaga	cagacatcga	23640
gcaagacccg	ggctatgtga	caccgggtga	acacgaggaa	gagttgaaac	gctttctaga	23700
gagagaggat	gaaaactgcc	caaaacagcg	agcagataac	tatcaccaag	atgctggaaa	23760
tagggatcag	aacaccgact	acctcatagg	gcttgacggg	gaagacgcgc	tccttaaaca	23820
tctagcaaga	cagtcgctca	tagtcaagga	tgcattattg	gacagaactg	aagtgcccac	23880
cagtgtggaa	gagctcagct	gcgccctacg	gcttaacctt	ttttcacctc	gtactcccc	23940
caaacgtcag	ccaaacggca	cctgcgagcc	aaatcctcgc	ttaaactttt	atccagcttt	24000
tgctgtgcc	gaagtactgg	ctacctatca	catctttttt	aaaaatcaaa	aaattccagt	24060
ctcctgccgc	gctaatacga	cccgcgccga	tgccctactc	aatctgggac	ctggttcacg	24120
cttacctgat	atagcttcct	tgggaagagg	tccaaagatc	ttcgagggtc	tgggcaataa	24180
tgagactcgg	gccgcaaagt	ctctgcaaaa	gggagaaaat	ggcatggatg	agcatcacag	24240
cgttctgggt	gaattggaag	gcgataatgc	cagactcgca	gtactcaagc	gaagcgtcga	24300
ggtcacacac	ttcgcatatc	ccgctgtcaa	cctgccccct	aaagtcatga	cggcgggtcat	24360
ggaccagtta	ctcattaagc	gcgcaagtcc	cctttcagaa	gacatgcatg	accagatgc	24420
ctgtgatgag	ggtaaaccag	tggtcagtga	tgagcagcta	accgatggc	tgggcaccga	24480
ctctcccccg	gatttggaag	agcgtcgcga	gcttatgatg	gccgtgggtg	tggttaccgt	24540
agaactagag	tgtctccgac	gtttctttac	cgattcagaa	accttgcgca	aactcgaaga	24600
gaatctgcac	tacactttta	gacacggctt	tgtgcggcag	gcatgcaaga	tatctaactg	24660
ggaactcacc	aacctgggtt	cctacatggg	tattctgcat	gagaatcgcc	taggacaaag	24720
cgtgctgcac	agcaccctta	aggggggaag	ccgcctgat	tacatccgcg	attgtgtcta	24780
tctctacctg	tgccacacgt	ggcaaaccgg	catgggtgta	tggcagcaat	gtttagaaga	24840
acagaacttg	aaagagcttg	acaagctctt	acagaaatct	cttaagggtc	tgtggacagg	24900
gttcgacgag	cgcaccgtcg	cttccgacct	ggcagacctc	atcttcccag	agcgtctcag	24960
ggttactttg	cgaaacggat	tgcctgactt	tatgagccag	agcatgctta	acaattttcg	25020
ctctttcctc	ctggaacgct	ccggtatcct	gcccgcacc	tgctgcgcac	tgccctccga	25080
ctttgtgect	ctcacctacc	gcgagtgcgc	cccgcgccta	tggagtcaat	gctacctgtt	25140
ccgtctggcc	aactatctct	cctaccactc	ggatgtgatc	gaggatgtga	gcggagacgg	25200
cttgctggag	tgccactgcc	gctgcaatct	gtgcacgccc	caccggtccc	tagcttgcaa	25260
cccccagttg	atgagcgaaa	cccagataat	aggcaccttt	gaattgcaag	gccccagcag	25320
ccaaggcgat	gggtcttctc	ctgggcaaa	tttaaaactg	accccgagg	tgtggacctc	25380
cgcctacttg	cgcaagtttg	ctccggaaga	ttaccacccc	tatgaaatca	agttctatga	25440
ggaccaatca	cagcctccaa	aggccgaact	ttcggttgcc	gtcatcacc	agggggcaat	25500
tctggcccaa	ttgcaagcca	tccaaaaatc	ccgccaagaa	tttctactga	aaaagggtaa	25560
gggggtctac	cttgaccccc	agaccggcga	ggaactcaac	acaagggttc	ctcaggatgt	25620
cccaacgacg	agaaaacaag	aagtgaagg	tgcagccgcc	gccccagaa	gatatggagg	25680
aagattggga	cagtcaggca	gaggaggcgg	aggaggacag	tctggaggac	agtctggagg	25740
aagacagttt	ggaggaggaa	aacgaggagg	cagaggaggt	ggaagaagta	accgccgaca	25800
aacagttatc	ctcggctgcg	gagacaagca	acagcgctac	catctccgct	ccgagtcgag	25860
gaaccgcggc	gcgtcccagc	agtagatggg	acgagaccgg	acgcttccc	aaccaacca	25920
gcgttccaa	gaccggtaag	aaggatcggc	agggatacaa	gtcctggcgg	gggcataaga	25980
atgccatcat	ctcctgcttg	catgagtgcg	ggggcaacat	atccttcacg	cggcgctact	26040
tgctattcca	ccatgggggtg	aactttccgc	gcaatgtttt	gcattactac	cgtcacctcc	26100
acagccccta	ctatagccag	caaattccga	cagtctcgac	agataaagac	agcggcggcg	26160
acctccaaca	gaaaaccagc	agcggcagtt	agaaaataca	caacaagtgc	agcaacagga	26220
ggattaaaga	ttacagccaa	cgagccagcg	caaaccgag	agttaagaaa	tcggatcttt	26280
ccaaccctgt	atgccatctt	ccagcagagt	cgggggtcaag	agcaggaact	gaaaataaaa	26340
aaccgatctc	tgcgttcgct	caccagaagt	tgtttgtatc	acaagagcga	agatcaactt	26400
cagcgcactc	tcgaggacgc	cgaggctctc	ttcaacaagt	actgcgcgct	gactcttaaa	26460
gagtaggcag	cgaccgcgct	tattcaaaaa	aggcggaat	tacatcatcc	tcgacatgag	26520
taaagaaatt	cccacgcctt	acatgtggag	ttatcaaccc	caaattgggt	tggcagcagg	26580
cgcctcccag	gactactcca	cccgcataaa	ttggctcagc	gcccggcctt	ctatgatttc	26640
tcgagttaat	gatatacgcg	cctaccgaaa	ccaaataact	ttggaacagt	cagctcttac	26700
caccacgccc	cgccaacacc	ttaatcccag	aaattggccc	gcccgcctag	tgtaccagga	26760
aagtcccgcg	cccaccactg	tattacttcc	tcgagacgcc	caggccgaag	tccaaatgac	26820
taatgcaggt	gcgcagttag	ctggcggctc	caccctatgt	cgtcacaggc	ctcggcataa	26880
tataaaacgc	ctgatgatca	gaggccgagg	tatccagctc	aacgacgagt	cggtgagctc	26940

tccgcttggt	ctacgaccag	acggaatctt	tcagattgcc	ggctgcggga	gatcttcctt	27000
cacccctcgt	caggctgttc	tgactttgga	aagttcgtct	tcgcaacccc	gctcgggcgg	27060
aatcgggacc	gttcaatttg	tagaggagtt	tactccctct	gtctacttca	accccttctc	27120
cggatctcct	gggcactacc	cggacgagtt	cataccgaac	ttcgacgcga	ttagcgagtc	27180
agtggacggc	tacgattgat	gtctggtgac	gcggctgagc	tatctcggct	gcgacatcta	27240
gaccactgcc	gccgctttcg	ctgctttgcc	cgggaactta	ttgagttcat	ctacttcgaa	27300
ctccccaagg	atcacccctca	aggtcgggcc	cacggagtgc	ggattactat	cgaaggcaaa	27360
atagactctc	gcctgcaacg	aattttctcc	cagcggcccc	tgctgatcga	gcgagaccag	27420
ggaaacacca	cggtttccat	ctactgcatt	tgtaatcacc	ccggattgca	tgaaagcctt	27480
tgctgtctta	tgtgtactga	gtttaataaa	aactgaatta	agactctcct	acggactgcc	27540
gcttcttcaa	cccggatttt	acaaccagaa	gaacaaaact	tttctgtcgc	tccaggactc	27600
tgtaacttcc	acctttccta	ctcacaaact	agaagctcaa	cgactacacc	gcttttccag	27660
aagcattttc	cctactaata	ctactttcaa	aaccggaggt	gagctccacg	gtctccctac	27720
agaaaaccct	tgggtggaag	cgggccttgc	agtactagga	attcttgccg	gtgggcttgc	27780
gattattctt	tgctacctat	acacaccttg	cttcactttc	ctagtgggtg	tgtgggtattg	27840
gtttaaaaaa	tggggcccat	actagtcttg	cttgttttac	tttcgctttt	ggaaccgggt	27900
tctgccaat	acgatccatg	tctagacttt	gacccagaaa	actgcacact	tacttttgca	27960
cccagacaaa	gccgcatctg	tggagtctct	attaagtgcg	gatgggaatg	cagggtccgtt	28020
gaaattacac	acaataacaa	aacctggaac	aataccttat	ccaccacatg	ggagccagga	28080
gttcccagag	ggtacactgt	ctctgtccga	ggtcctgacg	gttccatccg	cattagtaac	28140
aacactttca	ttttttctga	aatgtgcgat	ctggccatgt	tcatgagcaa	acagtattct	28200
ctatggcctc	ctagcaagga	caacatcgta	acgttctcca	ttgcttattg	cttgtgcgct	28260
tgcttcttta	ctgctttact	gtgcgtatgc	atacacctgc	ttgtaaccac	tcgcatcaaa	28320
aacgccaata	acaaagaaaa	aatgccttaa	cctctttctg	tttacagaca	tggcttctct	28380
tacatctctc	atatttgtca	gcattgtcac	tgccgctcac	ggacaaacag	tcgtctctat	28440
cccactagga	cataattaca	ctctcatagg	acccccaatc	acttcagagg	tcactctggac	28500
caaactggga	agcgttgatt	actttgatat	aatctgtaac	aaaacaaaac	caataatagt	28560
aacttgcaac	atacaaaaatc	ttacattgat	taatgttagc	aaagtttaca	gcggttacta	28620
ttatggttat	gacagatata	gtagtcaata	tagaaattac	ttggttcgtg	ttaccagatt	28680
gaaaaccacg	aaaatgccaa	atatggcaaa	gattcgatcc	gatgacaatt	ctctagaaac	28740
ttttacatct	cccaccacac	ccgacgaaaa	aaacatccca	gattcaatga	ttgcaattgt	28800
tgcagcgggtg	gcagtgggtga	tggcactaat	aataatatgc	atgcttttat	atgcttgcgc	28860
ctacaaaaag	tttcatccta	aaaaacaaga	tctcctacta	aggcttaaca	tttaatttct	28920
ttttatacag	ccatggtttc	cactaccaca	ttccttatgc	ttactagtct	cgcaactctg	28980
acttctgctc	gctcacacct	cactgtaact	ataggctcaa	actgcacact	aaaaggacct	29040
caagggtggc	atgtcttttg	gtggagaata	tatgacaatg	gatgggtttac	aaaaccatgt	29100
gaccaacctg	gtagattttt	ctgcaacggc	agagacctaa	ccattatcaa	cgtgacagca	29160
aatgacaaag	gcttctatta	tggaaaccgac	tataaaagta	gtttagatta	taacattatt	29220
gtactgccat	ctaccactcc	agcaccccg	acaactactt	tctctagcag	cagtgtcgct	29280
aacaatacaa	tttccaatcc	aacctttgcc	gcgcttttaa	aacgcactgt	gaataattct	29340
acaacttcac	atacaacaat	ttccacttca	acaatcagca	tcatcgctgc	agtgacaatt	29400
ggaatatcta	ttcttgtttt	taccataacc	tactacgcct	gctgctatag	aaaagacaaa	29460
cataaagggtg	atccattact	tagatttgat	atttaatttg	ttcttttttt	ttattttacag	29520
tatgggtgaac	accaatcatg	gtacctagaa	atttcttctt	caccatactc	atctgtgctt	29580
ttaatgtttg	cgctactttc	acagcagtag	ccacagcaac	cccagactgt	ataggagcat	29640
ttgcttccta	tgcacttttt	gctttttgta	cttgcatctg	cgtatgtagc	atagtctgcc	29700
tggttattaa	tttttttcaa	cttctagact	ggatccttgt	gcgaattgcc	tacctgcgcc	29760
accatcccga	ataccgcaac	caaaatatcg	cggcacttct	tagactcatc	taaaaccatg	29820
caggctatac	taccaatatt	tttgcttcta	ttgcttccct	acgctgtctc	aaccccagct	29880
gcctatagta	ctccaccaga	acaccttaga	aaatgcaaat	tccaacaacc	gtgggtcattt	29940
cttgcttgct	atcgagaaaa	atcagaaatc	cccccaaatt	taataatgat	tgctggaata	30000
attaatataa	tctgttgcac	cataatttca	tttttgatat	accccttatt	tgattttggc	30060
tggaatgctc	ccaatgcaca	tgatcatcca	caagaccag	aggaacacat	tccccacaaa	30120
aacatgcaac	atccaatagc	gctaatagat	tacgaaagtg	aaccacaacc	cccactactc	30180
cctgctatta	gttacttcaa	cctaaccggc	ggagatgact	gaaacactca	ccacctccaa	30240
ttccgcgcgag	gatctgctcg	atatggacgg	ccgcgtctca	gaacaacgac	ttgcccact	30300
acgcatccgc	cagcagcagg	aacgcgtggc	caaagagctc	agagatgtca	tccaaattca	30360
ccaatgcaaa	aaaggcatat	tctgtttggg	aaaacaagcc	aagatatcct	acgagatcac	30420
cgctactgac	catcgctctc	cttacgaact	tggcccccaa	cgacaaaaat	ttacctgcat	30480
ggtgggaatc	aaccccatag	ttatcaccca	acaaagtgga	gatactaagg	gttgcatcca	30540
ctgctcctgc	gattccatcg	agtgcaccta	caccctgctg	aagaccctat	gcggcctaag	30600
agacctgcta	ccaatgaatt	aaaaaaaaat	gattaataaa	aatcactta	cttgaaatca	30660

gcaataaggt	ctctgttgaa	atthttctccc	agcagcacct	cacttccctc	ttcccaactc	30720
tggatattcta	aaccccggtc	agcggcatac	tttctccata	ctttaaaggg	gatgtcaa	30780
tttagctcct	ctcctgtacc	cacaatcttc	atgtctttct	tcccagatga	ccaagagagt	30840
ccggctcagt	gactccttca	accctgtcta	cccctatgaa	gatgaaagca	cctcccaaca	30900
cccctttata	aacccagggg	ttatthtccc	aatggcttc	acacaaagcc	cagacggagt	30960
tcttacttta	aatgttttaa	ccccactaac	aaccacaggg	ggatctctac	agctaaaagt	31020
gggaggggga	cttacagtgg	atgacactga	tggtagctta	caagaaaaca	tacgtgctac	31080
agcaccatt	actaaaaata	atcactctgt	agaactatcc	attggaaatg	gattagaaac	31140
tcaaaacaat	aaactatgtg	ccaaattggg	aatggggtta	aaattttaaca	acggtgacat	31200
ttgtataaag	gatagtatta	acaccttatg	gactggaata	aaccctccac	ctaactgtca	31260
aattgtggaa	aacactaata	caaagtatgg	caaacttact	ttagtattag	taaaaaatgg	31320
agggcttgtt	aatgggtacg	tgtctctagt	tgggtgatca	gacactgtga	accaaagtgt	31380
cacacaaaag	acagcaaaca	tccaatttaag	attatattht	gactcttctg	gaaatctatt	31440
aactgaggaa	tcagacttaa	aaattccact	taaaaataaa	tcttctacag	cgaccagtga	31500
aactgtagcc	agcagcaaag	cctttatgcc	aagtactaca	gcttatccct	tcaacaccac	31560
tactagggat	agtgaaaact	acattcatgg	aatatgttac	tacatgacta	gttatgatag	31620
aagtctatth	cccttgaaca	tttctataat	gctaaacagc	cgtatgattt	cttccaatgt	31680
tgcctatgcc	atacaatttg	aatggaatct	aatgcaagt	gaatctccag	aaagcaacat	31740
agctacgctg	accacatccc	cctthtttctt	ttcttacatt	acagaagacg	acaactaaaa	31800
taaagtttaa	gtgtthtttat	ttaaaatcac	aaaattcgag	tagttattht	gcctccacct	31860
tcccatttga	cagaatacac	caatctctcc	ccacgcacag	ctthaaacat	ttggatacca	31920
ttagagatag	acattgttht	agattccaca	ttccaaacag	tttcagagcg	agccaatctg	31980
gggtcagtga	tagataaaaa	tccatcgcg	tagtctthta	aagcgcttht	acagtccaac	32040
tgtctcggtat	gcgactccgg	agtttggtatc	acggctcatct	ggaagaagaa	cgatgggaat	32100
cataatccga	aaacgggtatc	ggacgattgt	gtctcatcaa	accacaaagc	agccgctgtc	32160
tgcgtcgctc	cgtgcgactg	ctgtthtatgg	gatcagggtc	cacagtthtc	tgaagcatga	32220
thttaatagc	ccttaacatc	aactthtctgg	tgcgatgcgc	gcagcaacgc	attctgattt	32280
cactcaaatc	thttgcagttag	gtacaacaca	ttattacaat	attgtthta	aaaccataat	32340
taaaagcgct	ccagccaaaa	ctcatatctg	atataatcgc	ccctgcatga	ccatcatacc	32400
aaagtthta	ataaattaaa	tgacgtthtc	tcaaaaacac	actaccaca	tacatgatct	32460
ctthttggcat	gtgcatatta	acaatctgtc	tgtaccatgg	acaacgttgg	ttaatcatgc	32520
aacccaatat	aacctthccg	aaccacactg	ccaacaccgc	tccccagcc	atgcattgaa	32580
gtgaaccctg	ctgattacaa	tgacaatgaa	gaaccctaatt	ctctcgaccg	tgaatcactt	32640
gagaatgaaa	aatatctata	gtggcacaa	atagacataa	atgcatgcat	cttctcataa	32700
thtttaactc	ctcaggattt	agaaacatat	cccagggaat	aggaagctct	tgcagaacag	32760
taaagctggc	agaacaagga	agaccacgaa	cacaacttac	actatgcata	gtcatagtat	32820
cacaatctgg	caacagcggg	tgggtcttcag	tcatagaagc	tccgggtthca	thttctctac	32880
aacgtggtaa	ctggggtctg	gtgtaagggt	gatgtctggc	gcatgatgtc	gagcgtgcgc	32940
gcaaccttgt	cataatggag	ttgctthctg	acattctcgt	atthttgtata	gcaaaacgcg	33000
gccctggcag	aacacactct	tcttcgcctt	ctatctctgc	gcttagcgtg	thccgtgtga	33060
tagttcaagt	acagccacac	tcttaagttg	gtcaaaaagaa	tgtctggcttc	agttgtaatc	33120
aaaactccat	cgcattcta	tgttctgagg	aatcatcca	cggtagcata	tgcaaatccc	33180
aaccaagcaa	tgcaactgga	ttgcgtthtca	agcaggagag	gagagggaag	agacggaaga	33240
accatgttaa	thtttatthc	aaacgatctc	gcagtacttc	aaattgtaga	tcgcgcagat	33300
ggcatctctc	gccccactg	tgttggtgaa	aaagcacagc	taaatcaaaa	gaaatgcgat	33360
thttcaagggtg	ctcaacgggtg	gctthccaaca	aagcctccac	gcgcacatcc	aagaacaaaa	33420
gaataccaaa	agaaggagca	thttctaaact	cctcaatcat	catattacat	thctgcacca	33480
thcccagata	atthttcagct	thccagcctt	gaattatthc	tgtcagttct	tgtggtaaat	33540
ccaatccaca	cattacaaac	aggtcccggg	gggcgccttc	caccaccatt	cttaaacaca	33600
ccctcataat	gacaaaatat	cttgctctctg	tgtcacctgt	agcgaattga	gaatggcaac	33660
atcaattgac	atgcccttgg	ctctaagttc	thctthtaagt	tctagttgta	aaaactctct	33720
catattatca	ccaaactgct	tagccagaag	ccccccggga	acaagagcag	gggacgctac	33780
agtgcagtac	aagcgcagac	ctccccaat	ggctccagca	aaaacaagat	tggataaagc	33840
atattgggaa	ccaccagtaa	tatcatcgaa	gttgctggaa	atataatcag	gcagagthtc	33900
ttgtagaat	tgaataaaa	aaaaatttgc	caaaaaaaca	thcaaaacct	ctgggatgca	33960
aatgcaatag	gttaccgcgc	tgcgctccaa	cattgttagt	thtgaattag	tctgcaaaaa	34020
taaaaaaaaa	acaagcgtca	tatcatagta	gcctgacgaa	caggtggata	aatcagthtc	34080
tccatcacaa	gacaagccac	agggctctcca	gctcgaccct	cgtaaaacct	gtcatcgtga	34140
thaaacaaca	gcaccgaaag	thcctcgcg	tgaccagcat	gaataagtct	tgatgaagca	34200
tacaatccag	acatgttagc	atcagtttaag	gagaaaaaac	agccaacata	gcctthtgggt	34260
ataattatgc	thaatcgtaa	gtatagcaaa	gccacccttc	gcggatacaa	agtaaaaggc	34320
acaggagaat	aaaaaatata	attatthtctc	tgtctgtgtt	taggcaacgt	cgcccccggt	34380

ccctctaaat acacatacaa agcctcatca gccatggctt accagagaaa gtacagcggg 34440
cacacaaacc acaagctcta aagtcactct ccaacctstc cacaatatat atacacaagc 34500
cctaaactga cgtaatggga ctaaagtgtg aaaaatcccg ccaaacccaa cacacacccc 34560
gaaactgcgt caccagggaa aagtacagtt tcaacttcgc aatcccaaca agcgtcactt 34620
cctctttctc acggtacgtc acatcccatt aacttacaac gtcattttcc cacggccgcg 34680
ccgccccttt taaccgttaa cccacagcc aatcaccaca cggcccacac tttttaaaat 34740
cacctcattt acatattggc accattccat ctataaggta tattattgat gatg 34794

<210> 45
<211> 180
<212> PRT
<213> adenoviridae

<220>
<221> SITE
<222> (1)..(180)
<223> /note="pCC536s E1B-21K sequence"

<400> 45
Met Glu Ala Trp Glu Cys Leu Glu Asp Phe Ser Ala Val Arg Asn Leu
1 5 10 15
Leu Glu Gln Ser Ser Asn Ser Thr Ser Trp Phe Trp Arg Phe Leu Trp
20 25 30
Gly Ser Ser Gln Ala Lys Leu Val Cys Arg Ile Lys Glu Asp Tyr Lys
35 40 45
Trp Glu Phe Glu Glu Leu Leu Lys Ser Cys Gly Glu Leu Phe Asp Ser
50 55 60
Leu Asn Leu Gly His Gln Ala Leu Phe Gln Glu Lys Val Ile Lys Thr
65 70 75 80
Leu Asp Phe Ser Thr Pro Gly Arg Ala Ala Ala Val Ala Phe Leu
85 90 95
Ser Phe Ile Lys Asp Lys Trp Ser Glu Glu Thr His Leu Ser Gly Gly
100 105 110
Tyr Leu Leu Asp Phe Leu Ala Met His Leu Trp Arg Ala Val Val Arg
115 120 125
His Lys Asn Arg Leu Leu Leu Leu Ser Ser Val Arg Pro Ala Ile Ile
130 135 140
Pro Thr Glu Glu Gln Gln Gln Gln Gln Glu Glu Ala Arg Arg Arg Arg
145 150 155 160
Gln Glu Gln Ser Pro Trp Asn Pro Arg Ala Gly Leu Asp Pro Pro Val
165 170 175
Glu Glu Ala Glu
180

<210> 46
<211> 176
<212> PRT
<213> adenoviridae

<220>
 <221> SITE
 <222> (1)..(176)
 <223> /note="Ad5. E1B-21K sequence"

<400> 46
 Met Glu Ala Trp Glu Cys Leu Glu Asp Phe Ser Ala Val Arg Asn Leu
 1 5 10 15
 Leu Glu Gln Ser Ser Asn Ser Thr Ser Trp Phe Trp Arg Phe Leu Trp
 20 25 30
 Gly Ser Ser Gln Ala Lys Leu Val Cys Arg Ile Lys Glu Asp Tyr Lys
 35 40 45
 Trp Glu Phe Glu Glu Leu Leu Lys Ser Cys Gly Glu Leu Phe Asp Ser
 50 55 60
 Leu Asn Leu Gly His Gln Ala Leu Phe Gln Glu Lys Val Ile Lys Thr
 65 70 75 80
 Leu Asp Phe Ser Thr Pro Gly Arg Ala Ala Ala Ala Val Ala Phe Leu
 85 90 95
 Ser Phe Ile Lys Asp Lys Trp Ser Glu Glu Thr His Leu Ser Gly Gly
 100 105 110
 Tyr Leu Leu Asp Phe Leu Ala Met His Leu Trp Arg Ala Val Val Arg
 115 120 125
 His Lys Asn Arg Leu Leu Leu Leu Ser Ser Val Arg Pro Ala Ile Ile
 130 135 140
 Pro Thr Glu Glu Gln Gln Gln Gln Glu Glu Ala Arg Arg Arg Arg
 145 150 155 160
 Gln Glu Gln Ser Pro Trp Asn Pro Arg Ala Gly Leu Asp Pro Arg Glu
 165 170 175

<210> 47
 <211> 180
 <212> PRT
 <213> adenoviridae

<220>
 <221> SITE
 <222> (1)..(180)
 <223> /note="Ad35.E1B-21K sequence"

<400> 47
 Met Glu Val Trp Ala Ile Leu Glu Asp Leu Arg Lys Thr Arg Gln Leu
 1 5 10 15
 Leu Glu Ser Ala Ser Asp Gly Val Ser Gly Phe Trp Arg Phe Trp Phe
 20 25 30
 Ala Ser Glu Leu Ala Arg Val Val Phe Arg Ile Lys Gln Asp Tyr Lys
 35 40 45
 Gln Glu Phe Glu Lys Leu Leu Val Asp Cys Pro Gly Leu Phe Glu Ala
 50 55 60

Leu Asn Leu Gly His Gln Val His Phe Lys Glu Lys Val Leu Ser Val
 65 70 75 80
 Leu Asp Phe Ser Thr Pro Gly Arg Thr Ala Ala Val Ala Phe Leu
 85 90 95
 Thr Phe Ile Leu Asp Lys Trp Ile Pro Gln Thr His Phe Ser Arg Gly
 100 105 110
 Tyr Val Leu Asp Phe Ile Ala Thr Ala Leu Trp Arg Thr Trp Lys Val
 115 120 125
 Arg Lys Met Arg Thr Ile Leu Gly Tyr Trp Pro Val Gln Pro Leu Gly
 130 135 140
 Val Ala Gly Ile Leu Arg His Pro Pro Val Met Pro Ala Val Leu Glu
 145 150 155 160
 Glu Glu Gln Gln Glu Asp Asn Pro Arg Ala Gly Leu Asp Pro Pro Val
 165 170 175
 Glu Glu Ala Glu
 180

<210> 48
 <211> 494
 <212> PRT
 <213> adenoviridae

<220>
 <221> SITE
 <222> (1)..(494)
 <223> /note="pCC536s E1B-55K sequence"

<400> 48
 Met Glu Arg Arg Asn Pro Ser Glu Arg Gly Val Pro Ala Gly Phe Ser
 1 5 10 15
 Gly His Ala Ser Val Glu Ser Gly Cys Glu Thr Gln Glu Ser Pro Ala
 20 25 30
 Thr Val Val Phe Arg Pro Pro Gly Asp Asn Thr Asp Gly Gly Ala Ala
 35 40 45
 Ala Ala Ala Gly Gly Ser Gln Ala Ala Ala Ala Gly Ala Glu Pro Met
 50 55 60
 Glu Pro Glu Ser Arg Pro Gly Pro Ser Ser Gly Gly Gly Gly Val Ala
 65 70 75 80
 Asp Leu Ser Pro Glu Leu Gln Arg Val Leu Thr Gly Ser Thr Ser Thr
 85 90 95
 Gly Arg Asp Arg Gly Val Lys Arg Glu Arg Ala Ser Ser Gly Thr Asp
 100 105 110
 Ala Arg Ser Glu Leu Ala Leu Ser Leu Met Ser Arg Arg Arg Pro Glu
 115 120 125
 Thr Ile Trp Trp His Glu Val Gln Lys Glu Gly Arg Asp Glu Val Ser
 130 135 140

Val	Leu	Gln	Glu	Lys	Tyr	Ser	Leu	Glu	Gln	Val	Lys	Thr	Cys	Trp	Leu	145	150	155	160
Glu	Pro	Glu	Asp	Asp	Trp	Ala	Val	Ala	Ile	Lys	Asn	Tyr	Ala	Lys	Ile	165	170	175	
Ala	Leu	Arg	Pro	Asp	Lys	Gln	Tyr	Lys	Ile	Ser	Arg	Arg	Ile	Asn	Ile	180	185	190	
Arg	Asn	Ala	Cys	Tyr	Ile	Ser	Gly	Asn	Gly	Ala	Glu	Val	Val	Ile	Asp	195	200	205	
Thr	Gln	Asp	Lys	Thr	Val	Ile	Arg	Cys	Cys	Met	Met	Asp	Met	Trp	Pro	210	215	220	
Gly	Val	Val	Gly	Met	Glu	Ala	Val	Thr	Phe	Val	Asn	Val	Lys	Phe	Arg	225	230	235	240
Gly	Asp	Gly	Tyr	Asn	Gly	Ile	Val	Phe	Met	Ala	Asn	Thr	Lys	Leu	Ile	245	250	255	
Leu	His	Gly	Cys	Ser	Phe	Phe	Gly	Phe	Asn	Asn	Thr	Cys	Val	Asp	Ala	260	265	270	
Trp	Gly	Gln	Val	Ser	Val	Arg	Gly	Cys	Ser	Phe	Tyr	Ala	Cys	Trp	Ile	275	280	285	
Ala	Thr	Ala	Gly	Arg	Thr	Lys	Ser	Gln	Leu	Ser	Leu	Lys	Lys	Cys	Ile	290	295	300	
Phe	Gln	Arg	Cys	Asn	Leu	Gly	Ile	Leu	Asn	Glu	Gly	Glu	Ala	Arg	Val	305	310	315	320
Arg	His	Cys	Ala	Ser	Thr	Asp	Thr	Gly	Cys	Phe	Ile	Leu	Ile	Lys	Gly	325	330	335	
Asn	Ala	Ser	Val	Lys	His	Asn	Met	Ile	Cys	Gly	Ala	Ser	Asp	Glu	Arg	340	345	350	
Pro	Tyr	Gln	Met	Leu	Thr	Cys	Ala	Gly	Gly	His	Cys	Asn	Met	Leu	Ala	355	360	365	
Thr	Val	His	Ile	Val	Ser	His	Gln	Arg	Lys	Lys	Trp	Pro	Val	Phe	Asp	370	375	380	
His	Asn	Val	Leu	Thr	Lys	Cys	Thr	Met	His	Ala	Gly	Gly	Arg	Arg	Gly	385	390	395	400
Met	Phe	Met	Pro	Tyr	Gln	Cys	Asn	Met	Asn	His	Val	Lys	Val	Leu	Leu	405	410	415	
Glu	Pro	Asp	Ala	Phe	Ser	Arg	Met	Ser	Leu	Thr	Gly	Ile	Phe	Asp	Met	420	425	430	
Asn	Thr	Gln	Ile	Trp	Lys	Ile	Leu	Arg	Tyr	Asp	Asp	Thr	Arg	Ser	Arg	435	440	445	
Val	Arg	Ala	Cys	Glu	Cys	Gly	Gly	Lys	His	Ala	Arg	Phe	Gln	Pro	Val	450	455	460	
Cys	Val	Asp	Val	Thr	Glu	Asp	Leu	Arg	Pro	Asp	His	Leu	Val	Ile	Ala	465	470	475	480

Arg Thr Gly Ala Glu Phe Gly Ser Ser Gly Glu Glu Thr Asp
 485 490

<210> 49
 <211> 494
 <212> PRT
 <213> adenoviridae

<220>
 <221> SITE
 <222> (1)..(494)
 <223> /note="Ad35. E1B-55K sequence"

<400> 49
 Met Asp Pro Ala Asp Ser Phe Gln Gln Gly Ile Arg Phe Gly Phe His
 1 5 10 15
 Ser His Ser Ile Val Glu Asn Met Glu Gly Ser Gln Asp Glu Asp Asn
 20 25 30
 Leu Arg Leu Leu Ala Ser Ala Ala Phe Gly Cys Ser Gly Asn Pro Glu
 35 40 45
 Ala Ser Thr Gly His Ala Ser Gly Ser Gly Gly Gly Thr Ala Arg Gly
 50 55 60
 Gln Pro Glu Ser Arg Pro Gly Pro Ser Ser Gly Gly Gly Gly Val Ala
 65 70 75 80
 Asp Leu Ser Pro Glu Leu Gln Arg Val Leu Thr Gly Ser Thr Ser Thr
 85 90 95
 Gly Arg Asp Arg Gly Val Lys Arg Glu Arg Ala Ser Ser Gly Thr Asp
 100 105 110
 Ala Arg Ser Glu Leu Ala Leu Ser Leu Met Ser Arg Arg Arg Pro Glu
 115 120 125
 Thr Ile Trp Trp His Glu Val Gln Lys Glu Gly Arg Asp Glu Val Ser
 130 135 140
 Val Leu Gln Glu Lys Tyr Ser Leu Glu Gln Val Lys Thr Cys Trp Leu
 145 150 155 160
 Glu Pro Glu Asp Asp Trp Ala Val Ala Ile Lys Asn Tyr Ala Lys Ile
 165 170 175
 Ala Leu Arg Pro Asp Lys Gln Tyr Lys Ile Ser Arg Arg Ile Asn Ile
 180 185 190
 Arg Asn Ala Cys Tyr Ile Ser Gly Asn Gly Ala Glu Val Val Ile Asp
 195 200 205
 Thr Gln Asp Lys Thr Val Ile Arg Cys Cys Met Met Asp Met Trp Pro
 210 215 220
 Gly Val Val Gly Met Glu Ala Val Thr Phe Val Asn Val Lys Phe Arg
 225 230 235 240
 Gly Asp Gly Tyr Asn Gly Ile Val Phe Met Ala Asn Thr Lys Leu Ile
 245 250 255

Leu His Gly Cys Ser Phe Phe Gly Phe Asn Asn Thr Cys Val Asp Ala
 260 265 270
 Trp Gly Gln Val Ser Val Arg Gly Cys Ser Phe Tyr Ala Cys Trp Ile
 275 280 285
 Ala Thr Ala Gly Arg Thr Lys Ser Gln Leu Ser Leu Lys Lys Cys Ile
 290 295 300
 Phe Gln Arg Cys Asn Leu Gly Ile Leu Asn Glu Gly Glu Ala Arg Val
 305 310 315 320
 Arg His Cys Ala Ser Thr Asp Thr Gly Cys Phe Ile Leu Ile Lys Gly
 325 330 335
 Asn Ala Ser Val Lys His Asn Met Ile Cys Gly Ala Ser Asp Glu Arg
 340 345 350
 Pro Tyr Gln Met Leu Thr Cys Ala Gly Gly His Cys Asn Met Leu Ala
 355 360 365
 Thr Val His Ile Val Ser His Gln Arg Lys Lys Trp Pro Val Phe Asp
 370 375 380
 His Asn Val Leu Thr Lys Cys Thr Met His Ala Gly Gly Arg Arg Gly
 385 390 395 400
 Met Phe Met Pro Tyr Gln Cys Asn Met Asn His Val Lys Val Leu Leu
 405 410 415
 Glu Pro Asp Ala Phe Ser Arg Met Ser Leu Thr Gly Ile Phe Asp Met
 420 425 430
 Asn Thr Gln Ile Trp Lys Ile Leu Arg Tyr Asp Asp Thr Arg Ser Arg
 435 440 445
 Val Arg Ala Cys Glu Cys Gly Gly Lys His Ala Arg Phe Gln Pro Val
 450 455 460
 Cys Val Asp Val Thr Glu Asp Leu Arg Pro Asp His Leu Val Ile Ala
 465 470 475 480
 Arg Thr Gly Ala Glu Phe Gly Ser Ser Gly Glu Glu Thr Asp
 485 490

<210> 50
 <211> 496
 <212> PRT
 <213> adenoviridae

<220>
 <221> SITE
 <222> (1)..(496)
 <223> /note="Ad5. E1B-55K sequence"

<400> 50
 Met Glu Arg Arg Asn Pro Ser Glu Arg Gly Val Pro Ala Gly Phe Ser
 1 5 10 15
 Gly His Ala Ser Val Glu Ser Gly Cys Glu Thr Gln Glu Ser Pro Ala
 20 25 30

Thr Val Val Phe Arg Pro Pro Gly Asp Asn Thr Asp Gly Gly Ala Ala
 35 40 45
 Ala Ala Ala Gly Gly Ser Gln Ala Ala Ala Gly Ala Glu Pro Met
 50 55 60
 Glu Pro Glu Ser Arg Pro Gly Pro Ser Gly Met Asn Val Val Gln Val
 65 70 75 80
 Ala Glu Leu Tyr Pro Glu Leu Arg Arg Ile Leu Thr Ile Thr Glu Asp
 85 90 95
 Gly Gln Gly Leu Lys Gly Val Lys Arg Glu Arg Gly Ala Cys Glu Ala
 100 105 110
 Thr Glu Glu Ala Arg Asn Leu Ala Phe Ser Leu Met Thr Arg His Arg
 115 120 125
 Pro Glu Cys Ile Thr Phe Gln Gln Ile Lys Asp Asn Cys Ala Asn Glu
 130 135 140
 Leu Asp Leu Leu Ala Gln Lys Tyr Ser Ile Glu Gln Leu Thr Thr Tyr
 145 150 155 160
 Trp Leu Gln Pro Gly Asp Asp Phe Glu Glu Ala Ile Arg Val Tyr Ala
 165 170 175
 Lys Val Ala Leu Arg Pro Asp Cys Lys Tyr Lys Ile Ser Lys Leu Val
 180 185 190
 Asn Ile Arg Asn Cys Cys Tyr Ile Ser Gly Asn Gly Ala Glu Val Glu
 195 200 205
 Ile Asp Thr Glu Asp Arg Val Ala Phe Arg Cys Ser Met Ile Asn Met
 210 215 220
 Trp Pro Gly Val Leu Gly Met Asp Gly Val Val Ile Met Asn Val Arg
 225 230 235 240
 Phe Thr Gly Pro Asn Phe Ser Gly Thr Val Phe Leu Ala Asn Thr Asn
 245 250 255
 Leu Ile Leu His Gly Val Ser Phe Tyr Gly Phe Asn Asn Thr Cys Val
 260 265 270
 Glu Ala Trp Thr Asp Val Arg Val Arg Gly Cys Ala Phe Tyr Cys Cys
 275 280 285
 Trp Lys Gly Val Val Cys Arg Pro Lys Ser Arg Ala Ser Ile Lys Lys
 290 295 300
 Cys Leu Phe Glu Arg Cys Thr Leu Gly Ile Leu Ser Glu Gly Asn Ser
 305 310 315 320
 Arg Val Arg His Asn Val Ala Ser Asp Cys Gly Cys Phe Met Leu Val
 325 330 335
 Lys Ser Val Ala Val Ile Lys His Asn Met Val Cys Gly Asn Cys Glu
 340 345 350
 Asp Arg Ala Ser Gln Met Leu Thr Cys Ser Asp Gly Asn Cys His Leu
 355 360 365

Leu	Lys	Thr	Ile	His	Val	Ala	Ser	His	Ser	Arg	Lys	Ala	Trp	Pro	Val
370						375					380				
Phe	Glu	His	Asn	Ile	Leu	Thr	Arg	Cys	Ser	Leu	His	Leu	Gly	Asn	Arg
385					390					395					400
Arg	Gly	Val	Phe	Leu	Pro	Tyr	Gln	Cys	Asn	Leu	Ser	His	Thr	Lys	Ile
				405					410					415	
Leu	Leu	Glu	Pro	Glu	Ser	Met	Ser	Lys	Val	Asn	Leu	Asn	Gly	Val	Phe
			420					425					430		
Asp	Met	Thr	Met	Lys	Ile	Trp	Lys	Val	Leu	Arg	Tyr	Asp	Glu	Thr	Arg
	435						440					445			
Thr	Arg	Cys	Arg	Pro	Cys	Glu	Cys	Gly	Gly	Lys	His	Ile	Arg	Asn	Gln
	450					455					460				
Pro	Val	Met	Leu	Asp	Val	Thr	Glu	Glu	Leu	Arg	Pro	Asp	His	Leu	Val
465					470					475					480
Leu	Ala	Cys	Thr	Arg	Ala	Glu	Phe	Gly	Ser	Ser	Asp	Glu	Asp	Thr	Asp
				485					490					495	

THE PATENT & TRADEMARK OFFICE MAILROOM DATE
STAMPED HEREON IS AN ACKNOWLEDGEMENT THAT ON THIS
DATE THE PATENT & TRADEMARK OFFICE RECEIVED:

Response to Notice to File Missing Parts of Nonprovisional Application (2 pages); Copy of Notice to File Missing Parts of Nonprovisional Application (2 pages); Check No. 2460 for \$65.00 (for surcharge); Declaration (4 pages); Petition for Extension of Time (1 page) (in duplicate); Check No. 2459 for \$200.00 (for petition for extension of time for two months); Formal Drawings (38 sheets, 38 figures); Second Preliminary Amendment (2 pages); Statement Under 37 C.F.R. §§ 1.821 through 1.825 (2 pages) with Sequence Listing and CRF disk of Sequence Listing

Invention:	COMPLEMENTING CELL LINES
Applicant(s):	Vogels et al.
Filing Date:	November 15, 2001
Serial No.:	10/002,750
Date Sent:	May 31, 2002 via Express Mail Label No. EV092593948US
Docket No.:	2183-5148US
TLW/bv	



EV 092593948 US

EXPRESS
MAIL

UNITED STATES POSTAL SERVICE®

Customer Copy

Label 11-F October 2001

Post Office To Addressee

ORIGIN (POSTAL USE ONLY)

ZIP Code 84122	Day of Delivery <input type="checkbox"/> Next <input checked="" type="checkbox"/> Second <input type="checkbox"/> Third	Flat Rate Envelope <input type="checkbox"/>
Postage \$2.05	Return Receipt Fee \$0.00	Insurance Fee \$0.00
Int'l Alpha Country Code	COD Fee	Insurance Fee
Acceptance Clerk Initials [Signature]	Total Postage & Fees \$2.05	

DELIVERY (POSTAL USE ONLY)

Delivery Attempt Mo. Day	Time <input type="checkbox"/> AM <input type="checkbox"/> PM	Employee Signature
Delivery Attempt Mo. Day	Time <input type="checkbox"/> AM <input type="checkbox"/> PM	Employee Signature
Delivery Date Mo. Day	Time <input type="checkbox"/> AM <input type="checkbox"/> PM	Employee Signature
<input type="checkbox"/> WAIVER OF SIGNATURE (Domestic Only) Additional merchandise insurance is void if waiver of signature is requested. I wish delivery to be made without obtaining signature of addressee or addressee's agent (if delivery employee judges that article can be left in secure location) and I authorize that delivery employee's signature constitutes valid proof of delivery.		
NO DELIVERY <input type="checkbox"/> Weekend <input type="checkbox"/> Holiday		
Customer Signature		

CUSTOMER USE ONLY

METHOD OF PAYMENT:

Post Office No. 841812	Federal Agency Acct. No. or Postal Service Acct. No.
FROM: (PLEASE PRINT) TRASK BRITT LAW OFFICE 230 S 500 E STE 300 SALT LAKE CITY UT 84102-1900 2183-5148	TO: (PLEASE PRINT) COMMISSIONER FOR PATENTS WASHINGTON DC 20231-9998

ESS HARD.

You are making 3 copies.

FOR PICKUP OR TRACKING CALL 1-800-222-1811 www.usps.com

